REPORT RESUMES

ED 012 631 RC 000 576

ANNUAL CONFERENCE OF THE CO-ORDINATING COUNCIL FOR RESEARCH IN INDIAN EDUCATION (APRIL 12-13, 1962).

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ARIZONA STATE DEPT. OF PUBLIC INSTRUCTION, PHOENIX

PUB DATE APR 62

EDRS PRICE MF-$0.75 HC-$6.60 165P.

DESCRIPTORS- PHYSICAL HEALTH, HEALTH SERVICES, *HEALTH, SOCIAL DISADVANTAGEMENT, *ENGLISH (SECOND LANGUAGE), LANGUAGES, *AMERICAN INDIANS, JOB TRAINING, EMPLOYMENT PROBLEMS, *ATTITUDES, COUNSELING PROGRAMS, *ENVIRONMENTAL INFLUENCES, FOSTER FAMILY, PARENT ATTITUDES, STUDENT ATTITUDES, CULTURAL BACKGROUND, READING, EDUCATION, EDUCATIONAL LEGISLATION, HANDICAPPED CHILDREN, SCHOOLS, STUDENTS, DORMITORIES, HUALAPAI, HAVASUPAI, CHEMEHUEVI, PAPAGO, PIMA, MARICOPA, AMERICAN ENGLISH SERIES, APACHE, HOPI, NAVAJO, UTE, PHOENIX

THIS COMPILATION OF 18 PAPERS PRESENTED AT THE CONFERENCE DISCUSSES FOUR GENERAL AREAS OF INDIAN EDUCATION. THESE AREAS ARE--(1) HEALTH, INCLUDING PHYSICAL HEALTH, MEDICAL SERVICES, HEALTH RESEARCH, AND PROBLEMS OF TATTOOING AMONG INDIANS, (2) ATTITUDES, INCLUDING SOCIAL, FAMILY, PARENT, AND STUDENT ATTITUDES, AS WELL AS THE VALUE OF GUIDANCE PROGRAMS, FOSTER FAMILIES, CULTURAL BACKGROUND, DORMITORY SCHOOLS, AND ENVIRONMENTAL INFLUENCES IN RELATION TO THE STUDENT'S ATTITUDE TOWARD EDUCATION, (3) ENGLISH, INCLUDING THE SOUNDS OF THE INDIAN LANGUAGES CONTRASTED TO THOSE OF THE ENGLISH LANGUAGE, THE DIFFICULTIES WHICH ARISE IN TEACHING ENGLISH TO NON-ENGLISH-SPEAKING CHILDREN, AND STUDENTS' ABILITIES TO SPEAK ENGLISH COMPARED TO THEIR ABILITIES TO READ ENGLISH, AND (4) EMPLOYMENT, INCLUDING POINTING OUT THE PROBLEMS DUE TO POOR JOB QUALIFICATIONS AND LOCATIONS, AND THE RESULTS OF LEGISLATION ON THE RESOLUTION OF THOSE PROBLEMS. (FS)

ED012631

ANNUAL CONFERENCE
# of the
CO-ORDINATING COUNCIL FOR RESEARCH IN INDIAN EDUCATION

Arizona Highway Commission Auditorium

April 12 and 13, 1962

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
OFFICE OF EDUCATION

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FOREWORD

The Co-ordinating Council for Research in Indian Education is an organization composed of various agencies directly or indirectly concerned with Indian education. The objectives of the Council are as follows:

1. Encourage agencies to conduct research and submit the findings to the Council for distribution to other interested agencies.

2. Discuss and define problems in Indian education to obtain an over-all view of the problems in this area.

3. Encourage, instigate and co-ordinate the research activities of various agencies to obtain comprehensive information in the area of Indian research.

4. Assist in processing data and distributing research findings and publishing the results of research.

This years Conference opened with a welcome by Mr. W. W. (Skipper) Dick, State Superintendent of Public Instruction. A total of eighteen papers, covering a wide variety of topics, were presented. Emphasis this year was placed upon the effects of recent legislation in Indian education, the use of the linguistic approach to teaching Indian youngsters, and research in areas of health education.

A total of eighty-nine persons attended the meeting representing the following agencies:

A. American Friends Service Committee
B. Arizona Commission of Indian Affairs
C. Arizona State Employment Service
D. Association for Papago Affairs
E. Bureau of Indian Affairs - Gallup
F. Bureau of Indian Affairs - Phoenix
G. Central Arizona Indian Association
H. Colleges and Universities
I. Cornell Research Project
J. County School Superintendents
K. Mission School Educators
L. Navajo Health Education Project
M. Public Health Service - Division of Indian Health
N. Public School Educators
O. State Department of Public Health
P. State Department of Public Instruction
Q. Tribal Representatives

It is hoped that this Conference report will disseminate information gained from these research projects and will encourage others to conduct research and publicize their findings.

Louis C. Bernardoni, Chairman
Co-ordinating Council for Research in
Indian Education

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IMPLICATIONS OF RECENT LEGISLATION UPON THE EDUCATION AND JOB PLACEMENT OF INDIANS

James A. Rork

It is a distinct pleasure and privilege to be with you this afternoon and take part in the proceedings of the Co-ordinating Council for Research in Indian Education. I am proud to be associated with the men and women who comprise this Council and to participate in their work.

Before discussing the topic assigned to me today — that is, "Implications of Recent Legislation upon the Education and Job Placement of Indians" — I would like to set the stage, as it were, and focus your attention on the manpower requirements and training needs of industry, not only today but in the years ahead.

Nationally our population takes a 3-million-person leap every year. By 1965 we will need 10 million more workers than we did in 1955 to produce the goods and services necessary for such a rapidly expanding population at the standard of living we have considered necessary to a free society.

Where are we going to get these workers?

Five million of the ten million we need will be the men and women over 45 years of age.

Another 4-1/2 million will be young people between the ages of 14 and 24.

More than half will be women.

More importantly, the number of persons in the age bracket between 25 and 44 will be no larger in 1965 than it was in 1955. There will be, due to the low birth rate of the 1930's, 700,000 fewer men between 25 and 34 in 1965 than there were in 1955.

These figures add up to this conclusion:

At a time when intellectual excellence is a necessity for national survival, we face the demands of a peak economy supporting a vast population - with a work force that will not increase in its prime age brackets. We will depend more heavily upon older people, younger people, and women to bring the needed skills and the needed energies to bear upon our national strength.

That this requires the fullest utilization and the proper use of all our economic resources is the central fact of life in our economy.

Consider another aspect of the manpower future.

Last year, 3.8 million students were enrolled in American colleges. By 1970, there will be 7 million or more.

Our country's 1,937 colleges and universities got along on $3.5 billion in 1958. In 1970 they will need at least $8 billion.

Today, as never before in the world's history, the old maxim that "knowledge is power" is true in a literal, life-or-death sense.

Intellectual excellence is no longer an ornament to a society; it is a basic source of national strength. A whole new dimension has been added to the resources that support a nation's policy.

Geographical advantage, overseas colonies, fruitful domestic commerce, fleets, Maginot Lines, systems of alliances -- these are no longer enough. A nation's people must now possess scientific and intellectual excellence.

We must gear our thinking to the economic and labor market changes which have been taking place in this country since the close of World War II. Indeed, we must recognize that the developments which have been taking place in this country are related to developments which are taking place throughout the world. We are in the midst of a period of remarkable change, in terms of both magnitude and rapidity. Within a relatively few years such colonial empires as the British, Dutch, Italian, and German -- which survived for centuries -- have disintegrated. There are emerging in Asia and in Africa new independent nations seeking self-expression. These developing and underdeveloped countries are attempting to achieve quickly economic gains and improved living standards which were not achieved over several centuries under previous cultural, social, economic, and political institutions.

At the same time we are experiencing technological and scientific advances throughout the world which are greatly influencing the economic life of all nations. Obsolescence of plant and equipment is proceeding at a rapid rate. Investment in research and development is growing by leaps and bounds -- resulting in new techniques, methods of production, reliance on new raw materials and sources of energy. Markets are shifting and competition for markets is becoming more intense. These changes have important effects upon our human resources. Employment opportunities decline in many industries, while new employment opportunities are emerging in other industries. Occupational skills become obsolete. New combinations of skills and technical know-how give rise to many new occupations. Hiring specifications undergo significant changes -- frequently calling for greater skills, greater technical know-how and high educational levels of attainment.

In addition to these technological and scientific advances, not only the United States but the world as a whole is experiencing a tremendous growth in population, as mentioned previously. Increased birth rates of the war and post-war years, together with family formation at younger ages, add to our population. Advances in the healing arts and in medical science have added considerably to the longevity of our people. In this country we have practically eliminated infant mortality. Childhood diseases no longer constitute a major health problem. In the Nation as a whole, we are now primarily concerned with the diseases of old age. While these conditions may still be a problem with respect to the Indian, even here the advances have been great and the promise of the future bright.

Our population growth, as indicated earlier, is most rapid at the extreme age categories -- infants and youth and in older people. These groups create demands for a variety of social and public services as evidenced in the needs for more adequate educational facilities and teaching staffs in our elementary and high schools. We are now confronted with important educational problems growing out of the inadequacy of our post-high school educational system. The need for junior colleges and technical institutions is constantly increasing. The tragedy of the times is that many of our young people will not have access to post-high school education yet they will be competing for jobs in which the hiring specifications require post-high school education.

Many of you know the results of the national and Arizona studies of the Manpower Challenges of the 60's. These studies show conclusively that the biggest employment increases in Arizona and in the Nation in the coming decade will take place in the occupations which require the most training and education. It is well known that the average expected lifetime income of an individual worker increases in direct relationship to his level of educational attainment. With education, training, and experience comes the ability to compete for higher paying jobs. A second factor contributing to higher lifetime earnings is that a person with lower levels of educational attainment can well anticipate an increased frequency of periods of unemployment, as well as longer periods of unemployment.

As an example of the type of occupation requiring training and education, it is estimated that, nationally, clerical workers number over 10 million. By 1970 they will reach 12-1/2 million. In Arizona, workers in clerical occupations now number over 55,000. This group will grow to 105,000 by 1970. Workers in the skilled craftsmen occupations number over 65,000 in Arizona; by 1969 workers employed in these occupations will increase to a level of almost 118,000. In Arizona, the most rapidly growing groups of jobs in the next 10 years will be for professional and semiprofessional workers, closely followed by workers in clerical and sales occupations, and in skilled craftsmen occupations. The pattern nationally is approximately the same, with professional and semiprofessional expected to increase almost 50 percent nationally; while skilled workers will register gains of approximately 25 percent; and clerical and sales workers, over 25 percent. Conversely, nationally there will be no increase in the number of unskilled jobs, and in Arizona the increase will be considerably less than the over-all gain in percentage terms of all occupations. The key to successful employment in the future rests upon the pre-employment training and preparation of the individual workers. This is true for the Nation and for Arizona.

With respect to the Indian population, particularly in Arizona, the same overriding problems exist. However, of even more immediacy is the necessity to continue the expansion of the program of bringing full educational opportunities at the primary and secondary levels to the youth of our Indian reservations. Without adequate preparation in terms of education at this stage, the problems of competing in post-high school education are impossible and the problems of competing in the job market are becoming more and more discouraging. Competition in today's job market begins years before — with adequate educational background and attainment.

We characterize these post-war developments as progress. Too often, however, we fail to recognize that progress comes with change and that change is frequently accompanied by instability and problems of adjustment. Progress has a price. Over a period of time, and in terms of total aggregates, these changes will prove beneficial. In the short run, however, maladjustments occur. In many instances, problems of economic instability and of labor market maladjustments are evident in the impact that they have on human resources. One such evidence is found in the unemployment which we have been experiencing in the United States during the post-war years. Over the past decade we have had four economic recessions. Although these recessions have been relatively mild and of short duration, they have had an important effect on many segments of our work force. Despite rapid recovery, as measured by most economic indicators, we find that unemployment is higher, both in volume and rate, after each recession than before the recession occurred. We are concerned not only with the volume and rate of unemployment but also with the spotty geographical incidence of unemployment. In this regard, the enactment of the Area Redevelopment Act in May of last year by the Congress is a major effort to spur local community action to solve their manpower problems.

Rapid advances in automation and other technological changes have resulted in occupational obsolescence for many workers. We are, therefore, confronted with an urgent need to train and retrain large numbers of workers so that they may more effectively compete for jobs and be better qualified to obtain employment. The Manpower Development and Training Act, enacted into law by the Congress this past month, is a response to this need. The employment problems of our young people and the need for obtaining work experience gives rise to such legislative proposals as the Youth Employment Opportunities bill now before Congress.

We are inclined to think of automation and technological change largely in terms of urban industrial activities. As a matter of fact, scientific and technological changes in agriculture far outstrip those in urban industries. The average annual increase in agricultural productivity is almost three times as great as that of non-agricultural industries. The reduction in the number of farms, the decline in family-operated farms, and the increase in the size of farms with large capital investment in mechanical equipment have greatly reduced employment opportunities in agriculture.

The developments of the post-war years clearly demonstrate the high degree of interdependence of social, economic and political forces. They have caused this world to shrink. In the words of the 17th century English poet, "Man is not an Island". Neither is a state, I hasten to add, nor a nation, nor an Indian reservation. We must recognize that our common objective is to advance community and national economic well-being. The development and utilization of our human resources is crucial to both our economic well-being and the survival of our way of life. Too much is at stake for us to be indifferent to this reality.

I believe it germane to this discussion to delineate some aspects of the Area Redevelopment Act and other recent legislation passed or pending in the Congress which have implications on the education and job placement of Indians.

The Arizona State Employment Service has cooperated for years with the State Department of Public Instruction in vocational educational programs under such national legislation as the Smith-Hughes and George-Barton Acts. The Area Redevelopment Act presents a broader approach by the Employment Security system to training and retraining needs, although many of the things done under the Act, such as selection and referral of trainees, making subsistence payments to trainees, bringing labor market facts to bear on designation of areas, all mesh in with regular programs of the Agency.

However, it is the first time a training program has required the participation of the Federal-State Employment Security system, supported by Federal subsistence payments to trainees plus funds to bring new job opportunities into an area.

It is a difficult piece of legislation to work with because of the extensive inter-governmental relations required at all levels. However, it should bring great benefit to the local groups who come to grips with their economic problems.

While the Area Redevelopment Act is administered in the Department of Commerce, the Secretary of Labor among other things is given the responsibility to (1) determine the occupational training needs of the unemployed; (2) determine the occupational training requirements of the areas; (3) select trainees who by reason of education, experience, aptitude, proficiency, and interest are best qualified for training and who can reasonably be expected to obtain employment as a result of such training; and (4) work with the Department of Health, Education and Welfare and state and local education and training agencies to determine if additional facilities and services are needed for training.

This gets us involved in the training field as never before, although I want to point out that the actual training is the responsibility of the educational and training authorities in the State.

Training programs covering not only courses but also the costs of training are packaged at the local level, with the local Employment Service manager chairing the technical committee, and with the State Employment Service director and his staff participating actively in review and recommendation of the programs. The Employment

Security channels are utilized to bring the training plans to the Secretary.

The total direct appropriation by Congress was only $4 million for all administrative expenses. And for the actual costs of training the Act sets a limit of $4.5 million a year. In addition, $10 million is available for subsistence payments, none of which can be used for administration. Some additional funds are allotted by the Department of Commerce for services rendered to them in the field of designation of areas and assistance in development of Overall Economic Development Programs.

In Arizona, three counties — Apache, Mohave, and Navajo — and eight Indian reservations — Colorado River, Fort Apache, Gila River, Hopi, Navajo, Papago, San Carlos, and Salt River — have been designated as redevelopment areas. The three counties have taken no action toward the preparation of Overall Economic Development Programs, but seven of the eight designated Indian reservations have taken action as follows.

The Colorado River Indian Reservation has had its Overall Economic Development Program approved by the Secretary of Commerce in Washington, and their training program has now been approved for the training of 25 Farm Machinery Operators during a 16-week period. This is the first training program approved for the State of Arizona under the Area Redevelopment Act.

We have been advised that Checchi and Company, Consulting Economists, of Washington, D. C., will make a six-months' study of the Colorado River Reservation for the purpose of recommending steps to be taken to develop tourism and recreation projects. Additional training programs conceivably could result from the implementation of any suggest projects.

The Navajo Indian Reservation which, as you know, covers part of Utah, New Mexico, and Arizona has also prepared an Overall Economic Development Program and is currently awaiting approval of a program to train 200 workers for one of the Southwest's most modern and highly mechanized sawmills recently completed by the Navajo Tribe at Navajo, New Mexico. We believe that many residents of the Arizona section of the Navajo Indian Reservation will receive training and subsequent employment from this program even though the sawmill is located in the State of New Mexico.

The Salt River Indian Reservation is awaiting approval by the Secretary of Commerce of an Overall Economic Development Program which does not propose any immediate training. They have requested technical assistance to determine feasibility of such specific projects as;

1. Establishment of a corporate-managed agricultural porject on irrigated reservation lands.

2. Establishment of limited business and commerical development on the reservation.

3. Development of the recreation-tourist potential.

4. Plans to improve Indian housing and bring utilities to the Indian community; possible planning and zoning regulations; and a careful and detailed land use plan.

Any or all of the projects could increase the employment potential of the area.

The Fort Apache Indian Reservation in their Overall Economic Development Program, which is awaiting approval by the Arizona Development Board, lists a number of proposals such as:

1. Expansion of Tribal Forest Industries.

2. Expansion of recreation and related activities.

3. Land utilization and marketing.

4. A survey of mineral resources, ground water, and an inventory of manpower skills.

The Papago, Gila River, and San Carlos Indian Reservation redevelopment areas are preparing Overall Economic Development Programs but have not yet submitted them to the Arizona Development Board for State approval.

In approving the Manpower Development and Training Act of 1962 last March 13, Congress authorized the spending of $435 million over the next three years to take youths and unemployed adults off street corners and train them for jobs.

The Secretary of Labor will provide a program of occupational or on-the-job training for unemployed or underemployed individuals who cannot reasonably be expected to secure appropriate full-time employment without training.

Unemployed individuals shall have priority for referral to training.

Training allowances of $31.00 per week, based on the State's average unemployment compensation payment, will be paid for a maximum of 52 weeks to trainees who have had not less than three years of experience in gainful employment, and are either heads of families or heads of households as defined in the Internal Revenue Code of 1954.

Youths between the ages of 19 and 22 may be paid training allowances not exceeding $20.00 per week.

Youths 16 to 19 years of age will be eligible for training or schooling but not for allowances.

We believe the Arizona State Employment Service will be delegated certain duties and responsibilities under this Act. Our first responsibility, then, would be to find out what skills are needed and what types of workers are in short supply in a given local area. Then the unemployed will be screened to determine those suitable for training in the needed skills.

We expect to have this program underway by July 1. The Arizona State Employment Service offices in communities throughout the State will handle the applications — both for on-the-job training programs and for vocational programs.

Earlier in this talk, I mentioned the Youth Employment Opportunities bill. This bill, which is still pending in the Congress, provides three types of pilot programs to give young people employment opportunities which would enable them to acquire much-needed skills. These programs include training, employment in public service jobs with public and private nonprofit agencies, and the establishment of Youth Corps Conservation Camps. In the current decade, young men and women will be entering the labor force in rapidly growing numbers. They will expect, and they deserve, opportunities to acquire skills and to do useful work. The price of failure is frustration and disillusionment among our youth. This price few of us are prepared to pay.

These three pieces of legislation which have been discussed here today are most significant to the training and development of Indians in our labor force. Two of these bills have already been enacted into law, and there is every reason to believe that the third will be approved shortly by the Congress of the United States.

After the foregoing setting of the stage, I will now get to the subject of my address today — "Implications of Recent Legislation upon the Education and Job Placement of Indians". I believe that there are two sets of implications — one negative and one positive. For a few minutes I will take the negative point of view and outline the negative implications of the recent training legislation.

First of all, let me say that neither the Area Redevelopment Act nor the Manpower Development and Training Act as passed by the Congress are cure-alls. It is quite possible that this legislation may even more dramatically spotlight the educational deficiencies of the reservation Indian.

For example, neither bill provides industry or jobs either on the reservation or off. The Area Redevelopment Act requires community action for the development of industry and jobs and for beginning the training program. The Manpower Development and Training Act pre-supposes that the jobs are already available but that there are no qualified workers for the jobs. This is not generally true on Indian reservations or in the Arizona labor market. It is also true that Indian reservations have had very little success in attracting private industry to reservation sites. This makes the requirement to train only for shortage skills even more stringent for Indian reservations.

Both of the training bills have three requirements that Indian groups find hard to meet. The first is that applicants for training must be qualified through prior education, training, or aptitude to assimilate fully and thus reap the most benefit from the training. There is overwhelming evidence that the educational level of Arizona reservation Indians is below the average level of attainment of the population of the State. This alone limits the qualification of a great proportion of Indian youth for training under these bills. We must also consider the fact that the Bureau of Indian Affairs, as well as tribal councils, have long provided academic and vocational training facilities; and the past few years Indian Relocation has provided both training and subsistence. The results so far from all of these opportunities have left much to be desired. The training bills, as far as Indians are concerned, are only offering more of the same thing that has been available.

The second requirement is that there be current or predicted expectation of job placement. Current placement expectations would require that there be jobs readily available which are not filled due to lack of qualified applicants.

Where are these unfilled jobs, either on reservations or in the Arizona labor market? Granted there are a few jobs not filled, but these are highly technical jobs requiring much longer training than either of the bills provide. Past experience has provided very few private jobs on Indian reservations. Is it reasonable to expect that enough jobs can be developed in the very near future to warrant training for expectation of these opportunities within a year?

The third requirement which will be hard to meet is that jobs and applicants must match geographically. Those trained under the bill must have reasonable opportunity for placement on the reservation or be mobile enough to migrate to areas where jobs are available. As I have mentioned before, very few job opportunities are developed on reservations, and that leaves mobility. Indian tribal councils, up to now, have not been overly interested in training their people for relocation after training. The relocation program, where the relocatees have received on-the-job training, help in finding housing, and subsistence during training, has been only partially successful in skill development and placement relocation.

In summary for the negative point of view — many Indians, for the most part, are not now prepared by adequate education to benefit from the training bills. The future job market will be even more competitive, requiring more and more of the basic educational background in which Indian workers are already deficient. Though the Area Redevelopment Act, as far as Arizona is concerned so far, has been slanted primarily toward Indian reservations, the Manpower Development and Training Act does not separate Indians for preferred consideration. As a consequence, if the Indians are not better qualified to take advantage of the Act, they are likely to fall even farther behind in the highly competitive labor market.

I do hope that no one leaves the audience at this particular time because you have heard only one admittedly exaggerated, gloomy point of view. I am personally more optimistic and want now to cover the positive implications of these two training bills.

To begin with, the Area Redevelopment Act provides impetus, direction, and technical assistance in developing job opportunities on the Indian reservations. The bill itself spells out step-by-step procedures for development. It provides a framework and guidelines for evaluating material resources and potential on which to base economic plans. It also provides the technical and financial assistance for meaningful assessment of manpower resources and potential. These studies will be similar to Arizona's Manpower Requirements and Training Needs Study and will help Indian leaders as much as the original one has helped our State educational leaders in training youth for needed occupations.

Both of the training bills will give more incentive to Indian youth to take full advantage of training opportunities already offered by the Bureau of Indian Affairs and tribal councils, as well as those offered by the recent legislation. Their reluctance to relocate for a long enough time to develop skills is understandable. The Area Redevelopment Act will provide training at or near home so that relocation will not be necessary and more will be willing to take training. For those who do want to relocate, training near home under either bill will give them much more confidence when they do go out. Under relocation they must learn the job and learn to live in a city environment at the same time. If they have already acquired the necessary skills, they can face city life with far more hope of success.

More important, the Area Redevelopment Act gives new hope for developing job opportunities on the reservations. Just working together to develop the Overall Economic Development Programs has given them new insight into the possibilities of developing the reservations enough to support their populations. Another feature of the Area Redevelopment Act is that the economic development plans must be their own plans. Most former plans for reservations have been developed at Federal levels with complete integration of Indians and withdrawal of the Bureau of Indian Affairs as the final aim, although most people realize this is many years in the future. Intermediate steps have been hazy and the end result seemed an impossible goal to reach. The Area Redevelopment Act requires that the plans be made by the Indians themselves and provides for a step-by-step process so that the various steps are each attainable. It provides for immediate progress toward one understandable and attainable objective before starting on the next attainable objective.

The Manpower Development and Training Act of 1962, though not giving preference to Indian development, will give needed time to prepare for competition in the labor market. Although the training bill is now specified for only three years, it is my opinion that our changing technology will require its extension indefinitely — or some form of additional youth and adult training and retraining. Those Indian youth who will now have more incentive to prepare themselves will have time to get the basic education needed to train under the Act. Studies conducted by our Agency and others indicate that Indian youth have aptitude for many needed skills. Basic education and job training will develop these skills and our Indian youth will be more likely to take advantage of training opportunities.

In summary for the positive — attainable objectives developed at the local community level will give impetus to development of jobs on Indian reservations. The possession of needed skills will give confidence and a determination to succeed to relocatees. Reasonable hope of job opportunity either at home or away will give tremendous incentive to Indian youth for education. There will almost certainly be time for the needed basic education as well as skill training.

At this point I would like to mention that the Arizona State Employment Service is not standing idly by, waiting for the results of the various training bills to prepare the Indian for fuller competition in the job market. For the 25 years of its existence, and particularly during the past decade, the local offices of this Agency have devoted considerable effort to job placement of Arizona reservation and non-reservation Indians. During Calendar Year 1961, a total of 33,368 placements of Arizona Indians were recorded by the offices of the Arizona State Employment Service. This established an all-time new high for total placements and represented a significant gain of 36 percent from the previous year of 1960. Of the total placements, 15,302, or 46 percent, were placements in nonagricultural industries. This was a record number, up 29 percent from the nonagricultural placements of 1960. Indians were placed on jobs as production workers, sawmill workers, miners, welders, carpenters, painters, firefighters, and many other occupations. Agricultural placements, also at an all-time high, were up 42 percent from 1960, to a 1961 total of 18,066.

These workers were placed primarily in Arizona; however, jobs were developed in Colorado, Idaho, New Mexico, and Utah agricultural areas. These agricultural jobs are in the cultivation and harvesting of cotton, sugar beets, miscellaneous vegetables, and, to a lesser degree, potatoes. Placement, counseling, and testing services are provided high school graduates of the Phoenix Indian School and to the schools on all of the Indian reservations. Full Employment Office services are provided throughout the State to all our Indian population.

With successful job preparation, however, such as is envisioned in the various pieces of recent legislation that I have discussed today, job placement of Indians in Arizona will continue to show new records each year. Not only will the numbers of Indians placed increase, but the quality of the jobs and the economic wellbeing resulting from such job placements will also increase.

The positive implications of this recent legislation will not occur without tremendous effort on the part of all of us. If we do nothing, most of the negative implications will apply. If we give our support and assistance to the tribal planning groups and to implementation of their plans, we should see positive action and accomplishment to the end that Indians will compete in the labor market on equal footing with non-Indians by having equal educational and training attainment.

HIGHER EDUCATION OF SOUTHWESTERN INDIANS WITH REFERENCE TO SUCCESS AND FAILURE

Dr. Bruce Meador

This study is financed by a grant from the United States Office of Education. The people who are helping with this study include: G. D. McGrath, Bob Roessel, Jerry Helmstadter, John Barnes, Elmer Nix, Lillie Williams, George Gill and Cindy Callaway, all at Arizona State University. We have been assisted by many people at other campuses including: Robert Gwilliam, Charles Minton, Stanley Newton, Edward Parmee, Norma Snyder, Herb Swanson, and Ned Wallace.

Our study includes Arizona, New Mexico, Colorado, and Utah. It will be completed next fall. At the present time, we are not in a position to supply any definite information. We are now in the process of putting the information on IBM cards and none of the data has been completely processed. I cannot, therefore, offer you any more than a sample of a sample, but it will suggest some of the areas we are investigating.

Institution A

A twenty per cent sample of the Indian drop-outs from this particular institution shows that forty per cent graduated in the upper third of their high school graduating class, thirty per cent in the middle third, and thirty per cent in the lower third.

I will predict that in a comparable study of non-Indians we will show that the largest number of college drop-outs will not come from the upper one-third of their high school graduating class.

Perhaps this indicates that the high schools attended by the Indians are not as demanding, perhaps it also indicates the presence of certain psychological factors referred to later in this paper. Perhaps this is due to a situation which sends only the top high school students to college.

The grade average for forty per cent of the drop-outs was lower than D, forty per cent was lower than C but higher than D, twenty per cent was higher than C.

Of these, thirty per cent were asked to leave because of grades. Apparently another thirty per cent left before they were asked to leave.

We can say, however, that low grades in this school accompany dropping out of school.

The median I.Q. for those for whom we had scores was 112. If these scores are correct and if this sample is a representative one, a great deal of potential is not being developed by our institutions of higher learning.

Institution B

In this twenty per cent sample of Indian drop-outs we find that two-thirds were required to leave because of unsatisfactory grades. The other third left for reasons not known to the university. A closer look at the interviews will reveal these reasons. Undoubtedly many of this one-third will also have low grades.

Incidentally, at this school the I.Q.'s were available on a fewer number of students. The average median was 97.

Institution C

In a twenty per cent sample of the Indian drop-outs from this institution, we find that the median I.Q. score is 105. In this same institution the median I.Q. score is 99 for students who have not dropped out of school.

Institution D

In a twenty per cent sample of Indian drop-outs from this school we find that sixty per cent dropped out directly for scholastic reasons and forty per cent for personal reasons, usually marriage.

Of those sampled, for which information was available, most came from the middle third of their graduating class, none came from the lower third of their high school graduating class.

This supports the idea that among the economically poorer groups, the below average student does not go to college.

We find in this school that the majority of drop-out students were in exclusively Indian classrooms prior to entering college.

I would like to advance the hypothesis that percentage wise, Indians with high academic aptitude drop out of college as frequently as Indians with moderate academic aptitude. I would offer as evidence the high I.Q. scores made by drop-out students at Institution A. I would guess that this was due to the greater emotional stress that these students encountered by reason of their more active imaginations, their greater ability to look into the future, and their keener awareness of the world around them.

If it is true that percentage wise more intelligent Indians drop out of school for emotional reasons than non-Indians or than less intelligent Indians, then it seems to me that the college which sets itself up to train the more gifted of our Indian youth must take upon itself the obligation to give these students more guidance and counseling than we might ordinarily think necessary. For instance, if we see two Indian students walk into our office, and one of them has been identified by mental tests as being quicker than the other, as a counselor we might make the mistake of concluding that the slower student would need our help more desperately. I suggest that this may not be correct.

This is a partial sample of the types of information which will be available at the end of this study.

AN ANALYSIS OF THE NAVAJO SCHOLARSHIP PROGRAM

E. Roby Leighton

Mr. Chairman, distinguished guests, and fellow participants of the Co-ordinating Council for Research in Indian Education, may I take this opportunity, in accordance with our Western cultural rite, to express my appreciation of the honor bestowed upon me in this invitation to, as we idiomatically say, speak on the subject "An Analysis of the Navajo Scholarship Program". With your permission, I should like to preface my talk with a short informational statement as background for our thinking.

I wrote this presentation last week while physically in Window Rock, headquarters of the Navajo Reservation. Is this simple fact of any importance to this group? Yes, I believe so. As a body interested in research and, ipso facto, research reporting, you should be aware that the following premises are considered by me to be implicitly established by the above factual statement.

(1) I am responsible for any value judgments expressed unless otherwise specifically stated.

(2) Since 1958, at intervals, I have had an opportunity to become (a) familiar with Navajo Tribal Scholarship records in the office of the original Executive Secretary of the Navajo Scholarship Committee, Dr. Don May, Bureau of Indian Affairs' Guidance Specialist concerned with Navajo education since 1936 and only retired October 27, 1961; (b) to become familiar with the Scholarship records in the Navajo Tribal Records Office, which is under the direction of Mrs. A. Allen, Records Supervisor of the Navajo Tribal administration; but (c) I am not familiar with files maintained by Mr. John Martin, Guidance Specialist of the Community Services Division of the Navajo Tribe. According to Dr. May's memorandum to the Executive Secretary of the Navajo Tribe dated October 24, 1961, Mr. Martin has since continued in his office Dr. May's records as the only files of current Navajo Scholarship students. Mr. Martin is on leave which began immediately following a field trip before this report was written; therefore, no real check could be made with him or his records for tentative totals developed incidentally in the course of current dissertation research in prior Tribal Records Room files to elicit a blanket sample of Navajo university drop-outs (with some form of Tribal aid) between 1949 and the college year of 1959-60.

(3) My physical presence on the reservation has permitted conversations of interpretative assistance since 1958 with the custodians of the Scholarship records,

as well as with principal long-standing members of the Scholarship Committee.[1]

(4) As you have already heard from the excellent presentations made here, the problems involved in Higher Education for Indians are being attacked upon a wide front. I'm sure we all agree that academic scholarships and their administrative committees for distribution and control constitute an increasingly significant mechanism for development of our western technologically oriented culture. This mechanism has only become significant in Navajo Tribal cultural development within the past ten years. Therefore, in order to avoid a discussion of the Navajo Scholarship Committee in isolation, we must at least recognize the existence of both majority and minority group cultural forces and their impinging intra-relationships.

For example, what is culture? Is it, as the recent cultural anthropologist, Dr. Ralph Linton, has said, "the mass of behavior that human beings in any society learn from their elders and pass on to the younger generation"?[2] Where did the formal education to pass on these behaviors fit into the pattern of the western culture as it was developed 150 years ago? Was this not a gradual growth which in 1802 provided Ohio with the first land grant to subsidize public schools in every township? Where does formal education fit into the western cultural pattern today? Recall that in 1880, 2.8% of our young people went to high school, in 1930 over 50% — and in 1955, almost 81% -- a 75 year growth.[3] But where did formal education fit into

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[1] Scholarship Committee representatives:

1953-1962 (current)	Mr. J. Maurice McCabe, Executive Secretary of the Navajo Tribe Representing Chairman Chairman: Mr. Sam Ahkeah - 1953-1955 Mr. Paul Jones - 1955 to present
1953- February 1962	Mr. Robert Young, Ass't. to the General Superintendent, Navajo Agency, Bureau of Indian Affairs Resigned February 1962 to fill newly created Gallup Area position, Tribal Affairs Officer.
1953- February 19, 1962	Mr. Dillon Platero, Chairman, Tribal Council Education Committee
February 19, 1962 - (4-12-62) continuing	Mr. Allen D. Yazzie, Chairman, Tribal Council Education Committee
1953-1961	Dr. Don May, B.I.A. - Guidance Specialist, Executive Secretary of the Navajo Tribal Scholarship Committee
	Mr. John Martin, Guidance, Community Services, Navajo Tribe - Executive Secretary

Refer to the Navajo Yearbook, edited by Mr. Robert Young to be issued in May, 1962. 1958: pp 29-31.

[2] Linton, Ralph. The Tree of Culture, (Abridged by Adelen Linton) New York: Vintage Books, 1959.

[3] Thompson, Merritt M. The History of Education, New York: Barnes and Noble, Reprinted, 1958.

the Navajo pattern a hundred and fifty years ago. Was there any Navajo formal academic training other than that for ceremonial specialization done on an individual basis, and was this subsidized by any organized group of Navajos? The answer is a simple — No! Where does formal education fit into the Navajo cultural pattern today? Based upon Mr. Robert Young's excellent report to the Fifth Annual Navajo Education Conference, we can estimate a percentage growth of Navajo high school graduates of about 80% in the twenty years up to 1961 — a ratio in the neighborhood of 4.1 in Navajo percentage growth rate. But even more important — where does formal education fit into the cultures of both the majority and the minority groups tomorrow? Should we consider the possibility of telescoping time even further in a rapid cultural change? If the minority ethnic group appears to be in the grip of a "Renaissance" surge of redirected self-realization and through its natural leaders desires to utilize the mechanisms of the majority group to achieve its new self-directed goal, is rapid change not only possible but desirable? What is the goal? The educational goal seems to be preparation for occupancy of the social and economic statuses and roles in the past primarily filled by non-Navajo citizens from the majority culture — statuses and roles not only existent on the Navajo Reservation but found within a national and international context.

Now — when Mr. Bernardoni and I, at the Fifth Annual Navajo Education Conference in Window Rock, February 13 - 15, 1962, discussed the subject upon which I was to report before this group, it was understood that material abstracted from a study for the Navajo Tribal Scholarship Committee, completed in May, 1960, was to be included. This study was under the direction of Dr. Edward Spicer, University of Arizona, during the tenure of a Predoctoral Fellowship from the National Institute of Mental Health, U.S.P.H.S., as is my current research. It covered characteristics of successful four year institutional Navajo Higher Education recipients of some form of Tribal aid between 1949 - 1959. A Navajo teacher speaking of time and its importance in western culture said recently, "It is still difficult for me to arrive in class myself, and to have my students arrive in class exactly at the required time by the clock, also to havethe clock tell my stomach when it is hungry". There is no escape here, either, from the clock. Therefore, I will compromise between two possible topic interpretations and discuss a few salient facts from my 1960 analysis of Navajo Tribal aided graduates from four year institutions of Higher Education between 1949 and 1959, but discuss them within the general framework of the Navajo Scholarship Program. Again, to save time, I shall rely upon your own knowledge of the general development of educational philosophy in our Western culture over a 2500 year time span to provide background for understanding the Navajo Scholarship Committee's difficulties in finding all the right answers to their nine years of experience.

Looking around, I can see that we all understand each other —— which translated means that it suits my administrative convenience to have disposed of these time-consuming underlying premises by assumption of your understanding, and that it is time to move to the scholarship committee background in briefest sketch:

The Government had carried on a limited scholarship and loan program before, but the first tribal loans were implemented in 1949. They were limited to a total of $2,000 and a maximum of $500 in any one year. The pressure of Navajo veterans whose G.I. entitlement ran out short of graduation was a significant factor in this development.

The first tribal scholarships were a logical development and were granted in 1953 under authority of Tribal Resolution CJ-21-53, Navajo Higher Education Fund, which appropriated "by and with the approval of the Secretary of the Interior the sum of $30,000 for the establishment of the 'Navajo Higher Educational Scholarship Fund' for expenditure in fiscal year 1954". This resolution called for a minimum of 1/2 Indian blood, and a selection based upon "previous scholastic achievement, personality, character, general promise and ability". The certification states it was approved "by a vote of 66 in favor and 0 opposed, this 22nd day of January 1953", was signed by Adolph Maloney for Sam Ahkeah, Chairman of the Navajo Tribal Council. It was approved by Allan G. Harper, Area Director. Except for the last, the following Tribal Council resolutions were also passed unanimously.

The next resolution, No. CJ-50-56, appropriated an additional $15,000 of unexpended funds from the previous year for that year's expenditure; the next, No. CL-47-56, granted permission to study abroad; No. CM-53-57 appropriated $5,000,000 to establish a permanent scholarship fund May 28, 1957; the next, No. CAU-32-59, was signed 1 June 1959, "Authorizing a Navajo Scholarship Orientation Program" by "Arizona State University in conjunction with the Scholarship and Education Committee of the Navajo Tribal Council"; CAU-52-59 authorized on 14 August 1959 an additional $30,000 from the Tribal Budget Funds to cover extra scholarship costs in 1960; CN-67-59 increased the Freshman summer orientation program to include not only Arizona State University but the University of New Mexico at a cost of $12,000 to the Tribal Budget Funds; CN-68-59 was passed then on 13 November 1959 for "Increasing the Scholarship Trust Fund" to another $5,000,000 to anticipate rising costs of a 1968-69 college enrollment of 3,000 Navajo students.

In a radio broadcast - Sunday, April 16, 1961, Samuel Billison, then a member of the Education Committee of the Navajo Tribal Council said that the $10,000,000 "accrues 4% interest and amounts to $400,000". He estimated this permitted only 400 young people to go to college. He said the scholarship program would be considered in May, July and August. He estimated that "Approximately 700 Navajo high school students were graduating in 1961 and nearly 300 were already in college". (It should be noted that a count of Navajo students attending schools of Higher Learning issued by the Bureau of Indian Affairs for the Gallup Area 1960-1961 to show students slated for Higher Education and grants, and upon which this figure was probably based, shows almost 75 of these Tribal aid students at the Government school at Haskell, in either 3 or 1 year nursing programs or in scattered vocational courses; while another 28 are listed as attending Fort Lewis A & M. The latter has just been authorized to add progressively the courses to make it a four year college.)

The next resolution of the Navajo Tribal Council was specifically directed to committee organization, (No. CAU-53-61) and was entitled, "Adopting Plan of Operation for the Administration of the Navajo Tribal Education Scholarship Program". This was to "formalize" procedures and make provision for "Changing conditions and other factors" by amending the resolution which had served as a policy line for the initial eight years. Certification for this resolution states as before that a quorum of the Tribal Council was present, but that it, "was passed by a vote of 33 in favor and 24 opposed, this 29th day of August 1961".

The first resolution called for five Scholarship Committee members; "(a) Chairman of the Navajo Tribal Council, (b) the Chairman of the Community Services Committee of the Navajo Tribal Council, (c) the Area Director, or his designated representative; (d) a citizen of the United States to be appointed by the Chairman of the Navajo Tribal Council, who is not a member of said Tribe, nor an employee of the Federal Government; and (e) a fifth person to be selected by the aforesaid four members".

In fact, the responsibility for this official committee as constituted until this 1961 resolution, devolved upon Mr. J. Maurice McCabe, Executive Secretary of the Navajo Tribe; Mr. Robert Young, Assistant to the General Superintendent, Navajo Agency; Mr. Dillon Platero, Chairman of the Navajo Tribal Education Committee (since February of this year pursuing further education at Arizona State University at Tempe); a doctor representing the U. S. Public Health Service; and an outside educator from the public schools in McKinley County, New Mexico.

CAU-53-61 pinpointed the appointment of Tribal Scholarship Committee members nearer an administrative operational level while leaving the distribution of membership about the same except for the addition of another B.I.A. representative-the Director of Schools, Navajo Agency. (The Chairman of the Tribal Education Committee was specifically labeled as the member who had been formerly designated as head of Navajo Community Services; the Tribal Chairman not only officially appointed his own representative but now also appointed U.S. Public Health officials as well as the public school official. And instead of the Area Director, the General Superintendent of the Navajo Agency officially appointed his own representative.) Of interest is the fact that of the six voting members, two only are still specified to be Navajos. Where previously the Scholarship Committee had adopted their own operational rules reflecting changes in committee thinking from experiences with growing numbers of college students who had vocational as well as academic problems, plus pressures and advice from all the friends, and relatives of applicants, etc., CAU-53-61 specifies conditions for grants as well as for operational procedures to award and administer them. A policy guide line for day to day decisions was laid down by the Tribal Council in this document. In general, I would estimate, the thinking developed in the past seven years by the Scholarship Committee and its operational spark plus, Dr. Don May, the faithful and indefatigable Executive Secretary, was adhered to. There were, of course, some changes reflecting this experience.

Of particular interest are these stipulations: that 1/4 Navajo blood is necessary instead of the former 1/2 Indian blood; that students must attend regionally accredited colleges; that only regular high school graduates may receive college grants, but that they as well as "examination type" qualified students may be considered for trade or technical training — A recent development-aid was extended to those desiring technical trade school and Bureau trade schools help, but was not extended to those receiving Bureau Relocation training.

While awards had been administratively pegged at $1,200 maximum for undergraduates and $2,000 maximum for graduate students unless an Advisory Council resolution made an exception, (CAU-53-61) this resolution raised the ceiling and established $2,000 maximum grant in any regular fiscal year and $3,000 with Scholarship Committee approval plus Advisory Committee approval.

The provision for Extraneous Expenses was of particular interest to educators interested in financing orientation; research or other projects related to a Scholarship program. It states that all income from the Navajo education trust funds "must be reserved for use in making awards to qualified and approved students. None of this income may be used for incidental Scholarship Committee expenses such as forms, clerk hire, testing and salary of the Committee Secretary." Also incidentally, "No part of any award may be used by the student to assist relatives." The only exception is to assist a spouse or children with Committee approval.

The limitations on awards reflect the Committee's eight year struggle to keep the student in the same college with the same initially declared objective. This is not a national trend nor, in a study of the graduates between 1949 and 1959, is it a Navajo trend. The resolution appears to now recognize this fact by permission to change colleges, only specifying that the student must have Committee approval.

At this point, it may be appropriate to introduce some figures from my study completed in 1960. But first it should be stated that Dr. Don May had been working with Navajo college students since 1936, and he had expanded his work to encompass the mushrooming applications for Tribal aid. (Records were kept for operational utility and not for statistical analysis. Informational copies were routed to the Tribal Records room as it became functional, but there could be no assurance of completeness of records since crossing agency lines for duplicate files was voluntary and operational utility was the first priority.) Since many applications were never completed, awards were often not accepted after paper work completion; students dropped out of school; re-entered; were dropped from scholarship aid for academic failure to maintain a C average, and 15 credits per semester; were re-instated; were given tribal loans or were processed for government aid or government schools; arrangements were made for working scholarships at the B.I.A. schools, etc., the number of files expanded and engulfed specific Tribal Scholarship folders.

The following totals are for 64 Navajo college graduates between 1949 and 1959 with some form of tribal aid:

University:		8 from one college	5 f : 3 m
		11 from two colleges	4 f : 7 m
		5 from three or more colleges	2 f : 3 m
	Sub Total	24	11 f :13 m
Teacher's Colleges:		19 from one college	9 f : 10 m
		6 from two colleges	2 f : 4 m
		2 from 3 or more "	0 f : 2 m
	Sub Total:	27	11 f : 16 m
Liberal Arts Colleges:		9 from one college	3 f : 6 m
		3 from two colleges	1 f : 2 m
		0 from 3 or more "	— : —
	Sub Total	12	4 f : 8 m
Technical Institutions:		1 from Tourneau Institute	— : 1 m
	Total	64	26 f : 38 m

A summary of the significance of these figures suggests that graduates attending Liberal Arts Colleges have the fewest transfers from other colleges, while the university graduates have the greatest number of transfers. University graduates show a ratio of 7 male to the 11 students initially 20 or over on entrance, while of the six Liberal Arts students initially 20 or over on entrance, 5 were male.

The following Table shows Graduates Beginning at a Junior College:

TWO COLLEGES - Total

To a University degree:	3 M 20 years 1 F " "
To a Teacher's College degree:	1 F 19 years
To a Liberal Arts College degree:	0

THREE COLLEGES - Total

To a University degree	3 M 20 years	1 M 19 years 1 F 19 "
To a Teacher's College:	1 M 20 years 1 F 20 "	1 M 19 years
To a Liberal Arts College degree:	0	

We note that 9 students over 20 years of age started at a Junior College. Seven were male while 4 began at the age of 19 or less in a Junior College. This is a ratio of 1 to 5 graduates, and could easily be a partial reflection of the large number of older students who either used G.I. funds to start college without much academic preparation, or older students who seized the opportunity suddenly opened to them by the new scholarship program before the pressure of many high school graduates appeared. Over a third of all the graduates were 20 years old or more upon entrance.

In addition to this, we find that among university students 2 out of 7 graduates of one institution took more than 4 years to graduate. Four out of 6 graduates who attended two institutions took more than 4 years to graduate. Two out of 3 graduates who went to three or more institutions took more than 4 years. Teachers college graduates reflect less difficulty in terms of length of time necessary for completion, but graduates of Liberal Arts colleges reflect the least difficulty. All 8 of the one institution graduates finished in 4 years, while only 1 of the three who attended 2 institutions took more than 4 years to get their degrees. Only 1 Liberal Arts graduate attended three colleges and he took more than 3 years. Again we see the effect of the smaller college in smoother transition from secondary school. But we also see the fact that even Navajo students who didn't make it in the regular period of 4 years still made it in the end!

Returning to the resolution CAU-53-61, we see an emphasis on the need for preference of students with better secondary school preparation even though vocational training is obviously considered important. The original objective of the Scholarship Committee had apparently been directed to Tribal leadership through college training. Experience with the program indicated certain differences in secondary school training which made it difficult to appraise references, grades, solid academic subject knowledge, and basic social orientation skills for college life.

Of the sixty-four successful Navajo students, the Bureau of Indian Affairs' schools provide --

13 University graduates
14 Teachers' College graduates
1 Liberal Arts College graduate
a total of 28 or 43%.

The Public Schools provide --

4 University graduates
2 Teachers' College graduates
2 Liberal Arts College graduates
1 four year Technical Institute graduate
a total of 9 or 14%.

The Mission Schools prepared --

7 University graduates
11 Teachers' College graduates
9 Liberal Arts College graduates
a total of 27 or 42%.

B.I.A. graduates were characterized by the fact that more than half entered college when they were twenty years and over; almost two-thirds were male, over a third finished high school before 1950; almost half were married before or during college; and over a third were veterans. Even those students with nothing below a grade of B in the four solids had difficulty in university work for at least one semester. This probably reflects lack of specific college training in Bureau schools several years ago and the effect of VA funds which did not cut off funds in the period of A - C struggle. By the way, the term "A-C" is one I coined to describe a period of difficulty in academic and social orientation most Navajo students encountered on first adjustment to a college.

The picture, of course, has changed in the past five years. But while secondary schools are raising their academic standards, and Navajo students are fanned out in boardertown public schools, the colleges and universities are, too. To use a Navy phrase, it is not only necessary to "drop anchor but also to steam full ahead" to keep position against a very strong current.

CAU-53-61 covered miscellaneous topics which are personally very important to the student and which restrict choice of school through amount of award. For example, "If the student is aided for a high cost college in such a situation it will ordinarily not exceed that given at a home state college which would serve his needs in full". The philosophy if the G.I. Bill is carried out by the provision that ordinarily the income of the parent should not influence the award of the academically talented student.

This is an interesting provision as it runs counter to most concepts of scholarship operation. Could this be a reflection of the particular situation of the Navajo Tribe whose better paid employees are more or less concentrated in location and may have the most interest in educating their children? And could it also reflect an attitude of sharing in a communal fund which belongs equally to all Tribal members?

A similar provision reflecting an extension into the private domain of individual student choice is the requirement that alternative aid be used instead of a scholarship grant if the Committee decides that aid is "available and fully adequate to care for the needs of the students".

A summary statement about the Navajo Tribal Scholarship Committee, the heart of the Navajo Scholarship program, should probably confine itself at this stage of development to these simple observations. The program is growing. The Tribal Councilmen are taking an increasing interest and assuming initiative in the operation of the Tribal Scholarship Committee as it affects constituents economically and psychologically. The Committee is gradually developing a focus which appears to be broader than the original concept of academic training aimed primarily at future Tribal Leadership. The individual students' welfare and independence is emerging as a possible objective rather than concentration on individual decision strongly guided by the objective of Tribal service. Instead, philosophically it appears to encompass the whole area of higher education with academic scholarship occupying only one part. This points up the desirability of special study of preparation, selection, student goals, college choice, and nuturance of success of a scholarship student in a specific program. The numbers of students require a versatile, well-informed and well-organized administrative office for implementation of programs and integration of action.

A summary statement about the sixty-four graduates between 1949 and 1959 with some Tribal aid must be confined to indications of trends. Certainly, these graduates who changed institutions progressed from lesser to more difficult and presumably from more sustaining institutions to larger and more impersonal institutions. Many showed the effect of what I have called A - O difficulty. That is, they had some trouble with social adjustment and/or academic work during the first semester or first year. When they progressed to a more difficult and/or more impersonal institution they exhibited this same difficulty. Many of the students, particularly older students, who succeeded, would never have met Scholarship Committee academic requirements the first year or so; fortunately for these students the Veterans Administration was not requiring this level of scholarship proficiency. One cannot help having an enormous admiration for the determination which made so many of these students struggle against real personal odds of language difficulty and experimental deficiency until they won their degrees.

My study shows clearly what I believe we all know -- facility with English is very important in college work. But -- if the Maori Tribes of New Zealand can educate their children in their own Districts so that they are fluently bi-lingual, as Dr. Felix Keesing reports in the latest issue of the Applied Anthropology Magazine, Human Organizations,[4] why should not we?

A personal letter dated February 20, 1962, from Mr. Robert Iffert, Chief of Faculty and Student Services, Division of Higher Education of the Office of Education says, "It is estimated, however, that total enrollment for advanced degrees represents about 10% of the total students engaged in work creditable toward a bachelor's or higher degree ....The total degree enrollment for fall 1961 was 3,891,000. By 1970 the corresponding figure, estimated from trend projections, is expected to rise to 6.9 million."

Certainly, the Navajo students will participate in this increase of college enrollment for undergraduate and graduate degrees. It is a difficult task for which to lay long-range plans when many who make the decisions in outlying districts are not familiar with the problems except in the most general way, and that within a Navajo value context. But the vision of Tribal Scholarship Committee members had made an excellent start. And again, speaking idiomatically -- a good start is half the battle!

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[4] Keesing, Felix M. "Aftermath of Renaissance. Restudy of a Moari Tribe." Human Organization, New York, Society of Applied Anthropology; Spring, 1962. Vol 21, No. 1.

LINGUISTIC ARTS IN EVERYDAY LIVING

Webster A. Schneck

Mr. Chairman, Ladies and Gentlemen

Miss Werner and I are indeed happy to be in this lovely city, enjoying the wonderful climate, sunshine, and picturesque surroundings, with all other fringe benefits that go with it. We express our gratitude for the invitation to meet with you people, for, we too are most anxious to get new ideas on linguistic arts. We hope that our contributions to this meeting will be of some benefit.

What brought about linguistic arts at the school we represent? What are its results? With a multitude of other facets that may come to your mind, this program did not start last week, a month ago, or even a year ago. It dates back to 1958-59.

We, and when I say we, I am referring to the staff who so graciously devoted much time in writing the program, realized the children encountered many difficulties in learning a second language. They have bilingual problems. They have cultural differences, and lack experiences in our non-Indian society.

Enumerating the steps in education from the day of birth to the time of destiny, you will find education divided into several steps which are all important in life. First comes home education. What type of education and training does he get during his first three years in life? At the age of three, the church enters his life. Does he experience spiritual values? What part does the family play in the community? Is the child encircled with material to provide him a good foundation before he enters school? Then comes school which is artificial education - - from there, self education. At the age of six the child is ready for school and all book knowledge becomes artificial. He gets hit between the eyes with two great problems - a foreign language which is all artificial to him plus books which further complicate the matter - and with a new living environment: different diet, new friends, new bed, new domicile. What could be more frustrating to a 6-year-old?

They learn to speak and have difficulty in the tongue twisters they encounter. They have very little home, church or community knowledge, so they speak the best they can. They say:

sometime - suntine
came - cane
Oh say - Jose

Phonics or phonetics are not new. I am sure some of you had invisible phonics in your school life. I too, had language difficulties when I started to school, and now I am bilingual. I had no knowledge of the English language and being a country boy made it much worse. My V's and W's were terrific and still are. After I could speak in sentences, I would say, "Throw the horse over the fence some hay". "Run the stairs up and shut the window down." "Give me some orange juice, vill ya?"

We began to realize that phonics are important or of great importance in a well-balanced educational diet. All goals are alike when children enter school. We want them to learn to read well; write legibly; figure accurately; listen attentatively; speak clearly; find answers to problems; and make intelligent choices. These, to me, are merely the fundamentals in education. We must give the students the traits which they missed in their first six years of life. Therefore, OralEnglish, its use and correctiveness, is necessary.

The incorporated family-style eating program and a sub-library in each dormitory concentrated on English. In guidance classes there was a definite need to master English more rapidly. Letter writing to parent; story telling; either read in books or Indian stories given in English via the Navajo road - these helped, but progress was very slow and tiring to students. There were conferences in which concepts were discussed to develop an idea that would produce better results, more rapid progress, more interest, and be more enjoyable to the students. At this point, we agreed that perhaps the aural-oral approach would be the most effective tool. We had several volunteers on the committee who wanted to try the experiment. Therefore, one of the teachers on the committee was given permission to use the aural-oral approach to teach English as the second language in her classroom, on an experimental basis. Recorded results and academic observations during the year showed, at the end of the year, pleasing results, progress, interest of students, and proved itself worthwhile when test scores were compared with other age groups in the same level who did not have formal linguistic training.

It was our opinion that linguistic arts should be persued and incorporated in our program. The text books on the market were too difficult for our students. We needed to concentrate on use of simple, correct oral language on the level of the child's understanding. This referred our efforts to write our own guide, if you want to call it such.

Hence, our first workshop. A committee of educational personnel from five sub-agencies of the Navajo Reservation met at Tohatchi, New Mexico, during June, 1960, to develop a sequential guide for the teaching of aural-oral English for Navajo children, under the direction and leadership of Ruth Werner. I can firmly say, that without Miss Werner's direction and leadership, this linguistic approach would not have been developed to such a successful level.

The Fries-Rojar AMERICAN ENGLISH SERIES, Guide Books I and II, published by the D. C. Heath and Company, served as a basis for this endeavor. The D. C. Heath and Company granted the Bureau of Indian Affairs permission to adapt their oral English material for use with Navajo children. A letter of permission is on file.

A volume entitled AURAL-ORAL ENGLISH GUIDE FOR TEACHERS OF

NAVAJO BEGINNERS recorded the accomplishments of the Tohatchi workshop members. Pilot teachers in various Navajo agency schools used the guide during the 1960-61 school year. The pilot program was a rewarding experience for participating teachers and students. Pupils taught by this linguistic method acquired confidence and skill in the use of spoken English.

A second committee met at the Shiprock Boarding School during June, 1961, to revise the guide developed at Tohatchi. Suggestions from the pilot teachers were incorporated in the revised edition. A third workshop will be held in June, 1962, to write the first grade guide.

Teachers teaching linguistics were volunteers and still are volunteers. In attempting to use these units, teachers were asked to:

1. Accept the linguistic approach to teaching English as a second language.
2. Accept the possibility that previous conceptions of language teaching and learning may have to be shelved or changed when using the linguistic approach.
3. Take enough time to have pupils practice the sentence patterns as suggested in ROUTINE DRILL PRACTICE. The success of this approach to teaching oral English depends largely upon giving pupils the extensive practice that is necessary for them to become fluent in the use of the patterns provided.
4. Expect to spend at least a week on each unit and more time if necessary to teach some of the units.
5. Study a system of phonics in order to become thoroughly familiar with the 44 basic phonetic facts used to indicate the elementary sounds necessary for the production of English words.
6. Listen carefully to detect pupil errors in sounding and provide enough practice with the letter sounds listed to enable ALL children to produce them correctly.

A boarding school has its advantages and disadvantages. In this case it is an asset to the academic program. We cannot overlook the fact, that if the program is carried out in the academic department, it should also be coordinated with every day living. The Navajo student lacks basic patterns which are well established in an ordinary child of a non-Navajo home who already has learned his speech patterns in the home, neighborhood environment, on the playground, at the store, in Sunday School when he enters school.

Surely and truly, the Navajo child has learned his speech patterns in a similar fashion, but when he goes to school they are not the speech patterns on which he can base his formal learning. They are in the wrong language. The basic speech patterns must be taught him by formal drill, lessons, charts, exercises in helping him to acquire the basic English patterns of speech which, as stated before, book knowledge is artificial. Therefore, in coordinating this artificial knowledge with everyday living experiences within dormitory living, we create a real living situation which the children do not experience at home.

The dormitory, the playground, the dining room, replace the home environment. Here is where we put into practice the actual or realistic situation challenging the child to use his knowledge, which he acquired in an artificial sense, and place it on a self-education basis. The teacher has the child from 9 to 12 and 1 to 4. The Guidance people have the child 18 hours a day and 24 hours a day on week-ends, subject to care and concern for his health, welfare and safety. He is awakened and put to bed, dressed and undressed, both with orders and admonitions given in English. While he lines up for the dining room, he has time to sing "Ten Little Indians" or "Mary Had a Little Lamb" or other favorites - one of the happiest ways of acquiring speech training. At the dining room he is encouraged to converse in English and learn the names of the food he is eating. There are tasks of tooth brushing, bed making, cleaning floors, etc., using tools probably unfamiliar at home. There are so many things whose names must be learned, and learned in using them.

On the playground there is plenty of opportunity to use his native speech with little danger that he will be emotionally damaged by being separated from it too abruptly. Organized games and play require learning the rules or words of the chant, or song "London Bridge" or"Looby Loo" in English. The various everyday living activities all tend toward linguistic instruction. Guidance classes, rules of manner, conduct and ethical concepts of friendliness, honesty, sharing, etc., are in English and help the child to think in the new tongue, as many of the concepts cannot be expressed in the old tongue. Moving pictures, film strips, television, all are in English. The picture may fascinate without much consciousness of the language, but surely there must be some of it absorbed in English. Craft classes - what the hand performs the tongue must have a name for; trips to the stores; visitations to points of interest on week-ends; and Sunday church attendance trips bring contacts with the outside world and exposure to more English.

Each domicile has a sub-library book collection. They can enjoy the pictures or listen to stories, and those who can read have a chance to practice the art. Those who can write have opportunities to write letters to parents and friends. A school bank is maintained for the children's spending money, and from this they learn banking procedures and add more English words and concepts. Gym classes, basketball, other athletics, chorus and band groups, all aid in the linguistic picture. Most of the terms used in these activities cannot readily be transmitted into Navajo. A new culture demands a new vocabulary and new modes of speech are directly related to new modes of thought and ideology.

Thus, the home environment, with the dormitory as the home, builds up speech patterns just as any actual home environment does. Very important then are the high standards of speech, conduct, and ability among those who supervise this environment and act in the place of the parents.

Motivation is often a problem. An over-age child may be bored for simple drill to speak correctly. He cannot see the reason or necessity for it. But on the playground or dining room the motivation is present. If he wants something he soon learns he must know the words. Thus, the basic need for communication results in speech.

Children are also motivated by a desire to please those who work with them, if their confidence is gained. They have exhibitionist tendencies and like to perform in public and receive applause and compliments. The open-house programs given in everyday living gives them a chance to show what they can do in crafts, dancing, speech, and other means of self-expression. And will you agree with me that any language is a means of categorizing experience?

I believe at this point, we have a real start in linguistic arts, yet the beginning reminds me of a joke.

In closing, let me quote Clyde Kluckhohn in Mirror for Man. "A Langunge is, in a sense, a philosophy." It is indeed so much an expression of a culture, that in acquiring a language some of the culture must be acquired with it. At least that is our hope in relation to the Navajo children. So when they sing The National Anthem they do not sing "Jose can you see," but "Oh, say! can you see".

AN EVALUATION OF A LINGUISTIC APPROACH TO TEACHING ENGLISH TO NAVAHOS

Ruth Werner

It is a pleasure to be here and to have an opportunity to tell you something of what is happening to the students who are taking part in the oral English pilot study that is being conducted on the Navaho Reservation in some of the Bureau of Indian Affairs schools. The teachers working with the program are enthusiastic about it.

This is the second year of experimentation with the linguistic approach to teaching English as a second language. The materials which the teachers are using are the ones mentioned by Mr. Schneck. They are the guides developed at Tohatchi and Shiprock and the Fries AMERICAN ENGLISH SERIES, including individual pupil copies of the American English Series.

The project is not strictly a scientific one. Employees engaged in it do not have time in addition to regular work schedules to carry on all phases of a scientific research project. However, we like to think of our work as action research. I can assure you that there has been a great amount of action on the part of many employees and many hours have been spent studying books, pamphlets and other publications dealing with the subject of linguistics. Both workshop groups worked enthusiastically and various members have requested that they be allowed to return this summer to help develop a guide for the first grade. Other interested persons have requested that they be included in the workshop committee.

During the 1960-61 school year, five beginner teachers and sixteen first, second, and third grade teachers participated in the pilot project. During the present 1961-62 school year, sixteen beginner teachers, fifteen first grade, eleven second grade, and eleven third grade teachers are using the linguistic approach to teaching English as a second language to Navaho children. A total of fifty-three teachers comprise the number now engaged in the project. Fourteen of those teachers are employed at Shiprock Boarding School.

Guide books for teaching arithmetic, reading and other subjects have been in use for many years. A sequential, graded guide for teaching oral English to beginners was welcomed last year by many teachers while others accepted it with skepticism or apprehension. Intonation marks were frightening. The use of contractions with beginners aroused much comment. Certain sentence patterns were considered improper and were thought by some teachers to embarrass the children. One educator not participating in the project said that she would not think of allowing her teachers to use the material because she would not ham-string them with sentence patterns, which would limit their creative ability.

These remarks came from persons not familiar with the linguistic approach to teaching English as a second language.

During the first year the teachers were so busy learning to use the material that they could not see the many possibilities it presented for creative teaching. This year they have found many opportunities for their students to use sentences throughout the school day in practically all oral work. The teachers have added many activities and conversations not suggested in the guides.

Very few BIA teachers come to the reservation prepared to teach English as a second language. Charles Fries in his book entitled TEACHING AND LEARNING ENGLISH AS A FOREIGN LANGUAGE, says "The ability to speak English does not necessarily qualify one to teach it as a second language. The effective teacher should know English, its sound system, its structural system and its vocabulary, from the point of view of a descriptive analysis in accord with modern linguistic science.

In learning a new language the chief problem is not at first that of learning vocabulary items. It is, first, the mastery of the sound system, to understand the stream of speech, to hear the distinctive sound features and to approximate their production.

Accuracy of sound, of rhythm, of intonation, of structural forms, of arrangement, within range of expression must come first and become automatic habit before the student is ready to devote his chief attention to expanding his vocabulary.

The majority of teachers using the linguistic approach to teaching English as a second language found that intonation did not present the problems they had anticipated. Only a few have trouble with intonation. Teachers have proved that beginners could quite easily master contractions. They discovered that the children rather quickly gained confidence and facility through the use of the suggested sentence patterns. They have expressed gratitude for help in teaching sounding, in teaching the indefinite articles, pronouns, gender, verbs and tense, word endings and many other difficult phases of English. Teachers gain security through the use of the guides for the linguistic approach points out many areas of difficulty and offers help in overcoming these difficulties.

The Navaho child learning to speak English has problems different from those of the average child entering school at the age of six. Keppie-Wedburg-Keslar in their book, SPEECH IMPROVEMENT THROUGH CHORAL SPEAKING, state "Many children entering the first grade have a comprehension vocabulary numbering thousands of words estimated to be 20,000 or more. Their learning problem is not one of word meaning, but one of recognition."

How long is it going to take the Navaho child to reach a comprehension vocabulary of 20,000 or more English words? We can readily understand the enormity of the task of teaching English to Navaho beginners. The problem of the Navaho child is one of learning word meaning as well as recognition. In addition, he must learn to make the strange English sounds and put them together in words. English words must be arranged in meaningful sentences in word order differing from that of his native language, Navaho. Both the teacher and the student profit from the use of the linguistic approach, which takes them successfully through the maze of beginning language learning.

Keppie-Wedburg-Keslar further state, "The skill in good speech is not merely training a child to talk. It involves thinking, imagination, sensitiveness in listening, accuracy in placing speech organs, pride in good speech, high standards in effort, a critical attitude toward self and a release and sense of power with accomplishment."

Last year many visitors from Bureau of Indian Affairs schools, from public schools and from mission schools came to Shiprock Boarding School to observe oral English classes. To date this year approximately thirty observers have visited the primary classrooms in which the linguistic approach is being used. Someone in almost every visiting group has commented about how well the students gave their attention to their teachers and to the children taking part in oral exercises. The pilot study has definitely helped improve listening skills.

Students in many classrooms where the linguistic approach is used speak almost entirely in sentences. Their ability to do so is no accident. Much hard work had to be done by teacher and students before give and take conversations in English could be carried on. Students must think in order to do this.

Intensive use of sentence patterns enables the pupil to gain confidence and facility with oral English. Improved oral English ability leads to improved reading, writing and spelling ability. Pupil success with spoken English is the most important incentive for exerting greater effort to learn more English. Pupil success gives the teacher self-confidence; therefore, teaching Navaho students becomes a rewarding experience.

The teachers engaged in implementing the pilot program and those of us interested in it are very pleased because of what is happening to the Navaho children receiving instruction through the linguistic approach.

The Navaho children in the pilot study have progressed far in the acquisition of good speech habits considering that instruction has been given for only two years. The following comments came from teachers using the linguistic approach to teaching English as a second language.

"The children in my classroom speak freely using the patterns they have learned. They quickly gained self-confidence and fluency."

"Children become good listeners. They learn to hear the English sounds before they try to reproduce them. They are encouraged to try sounding and speaking because their efforts result in successful experiences."

"Improved listening ability enables my Navaho students to listen to stories and poems with enjoyment and appreciation."

"Improved ability with speaking and sounding has enabled my pupils to improve in reading, writing and spelling."

"The aural-oral approach puts responsibility on the pupil as well as on the teacher. Both must become good listeners in order to know what is being said so that correct replies may be given to the questions asked."

"Students enjoy the sentence patterns because they provide conversational opportunities in a variety of meaningful situations. After a little practice, the children speak with improved intonation and with greater ease."

"My students enjoy playing the suggested games and dramatizing the stories and events set up in the guide."

"This material makes a rich contribution to the social growth of the non-English speaking child. The social activities introduce him to another culture in such a manner that he has a happy experience and thinks that learning English is play."

"Achievement tests show greater academic gains than were made during the years before the pilot project was begun."

This or a similar comment came from many teachers: "I believe that because of the pilot project the students speak more English in their private conversations out of the classroom as well as in the classroom. The children still jabber Navaho but much more English is heard than in former years."

"Oral English has become an accepted part of the day's work, just as reading, arithmetic, and other subjects are. The children were reluctant at first to use the sentence patterns but now they enjoy the oral English exercises because they can do them successfully. Some of the poor readers have gained status in the group because even though they can not read well, they can speak successfully."

"There is some carry-over from speaking in phrases to reading in phrases. The children read with better understanding. Many of the children are able to read adjectives rapidly. They are beginning to read without giving each word in a sentence equal stress."

"Many of the contractions in the aural-oral English guide are found in the primary reading texts. Oral practice with the contractions strengthens the reading program. Stress on the final sounds in spoken English helps to get better enunciation during oral reading."

"My students still make mistakes in the use of th, word endings such as final s, ed, t, p, and others, but they often immediately correct themselves or other children correct them."

"The pilot program has helped the better readers for now they enjoy using their voices to show excitement, to ask questions, and to give emphasis."

"The pilot program helps EVERY child in the classroom. No one gets missed. Some children progress faster than others, but every child in the room benefits."

"Our students speak more freely because they know what to say in a number of given situations. Their responses are more spontaneous than in previous years and the English they speak is of better quality. Fewer errors are heard."

"The work done in oral English in previous grades carries over very well to the next grade. My first graders came to school last fall with the ability to understand and respond to oral directions on the first day of school. After a minimum of review, the children were able to use the patterns learned the previous year."

"We can say with complete assurance that the children enjoy the pilot program. They want to please their teachers, and desire to improve their skills in oral English. This program is helpful because it is based on a slow, step by step process of improving speech habits. Most of the material is readily understood by the children even though some of the sounds introduced are completely foreign. The children like to tackle the sounds, and the majority can master them quickly. Progress and improved oral English facility are incentives which keep the students working with increased interest on the pilot project materials."

Using the linguistic approach to teach oral English has meant additional time-consuming work for the teachers engaged in the project. It has brought about some changes in thinking about language learning. It has meant acceptance of the use of sentence patterns. Most of the skeptics have become believers. The following are quotes from teachers who are now using the guide.

"In my opinion, the Aural-Oral Guide is THE BEST thing that has happened for the teachers in the primary grades. I plan to start using it at the beginning of the next school term and hope to spend more time on the program. I feel sure that the more time spent on the program, the better the results with it will be."

"I continually find the Aural-Oral English Guide for Teachers of Navaho Beginners' invaluable in the teaching of aural-oral English to my first grade Navaho children. This guide is the only material I have been able to find during my three and one-half years on the Navaho reservation which I feel has given me some solid footing in the realm of teaching oral English in a systematic manner."

"I agree whole-heartedly with the statement in the acknowledgment of the guide that pupils taught by the linguistic approach acquire confidence and skill in the use of spoken English, and I would certainly welcome an aural-oral guide for teachers of Navaho first grade children."

"The material is well organized. A great deal of time and effort are required from the teacher, but I find the effort well worth while because of pupil progress and accomplishment."

"The sequential organization of the units is helpful to the teacher in planning lessons and in preparing day by day instructional materials."

"The vocabulary used in the Aural-Oral English Guide is appropriate for beginners. The children talk about familiar items such as those around them in the school and in the home, the things they see and feel and use in everyday living. I think doing this prepares the students for better comprehension when they begin to read."

"I like the way that cultural patterns are incorporated gradually into the activities."

"My students are not embarrassed by the aural-oral approach to learning English. They willingly try to speak when they realize that they are forming good language habits, even though it takes practice, correction, and more practice. The children consider the exercises fun."

"I certainly agree with this statement from Keppie-Wedburg-Keslar: 'Abundant use of oral work stimulates the child's confidence and enables the teacher to keep track of the youngster's thinking processes.' "

"My pupils enjoy dressing as a policeman, a nurse, a teacher, or taking some other character part. They enjoy acting the parts of adults and speaking the sentences set up in the conversations in the guide."

"Because of the successful experience I have had using this material with my beginners and because of the very good results attained this year, I want to continue to use this program in the future."

"I am looking forward to teaching my third graders more advanced material from the Fries books next year. I think this material is wonderful for the teacher as well as for the children. I wish the fourth and fifth grades could continue the work begun in the lower grades. It is discouraging to hear the children revert to Navaho after I have worked so hard to teach oral English."

"It is helpful for each child to have a copy of the Fries, American English Series, paper backed text. Having books in the hands of the children helps to hold their interest and I seem to get better responses from them when they use the books."

"The teachers at our school are enthusiastic about the pilot project after working with it for two years. They like the step by step method of improving the English of the Navaho children. They like the way the work of one grade carries over to the next grade. They feel that the program gives them greater self-confidence and that it helps to make teaching a rewarding experience."

"The people in the community have received the aural-oral English program with enthusiasm. They are pleased to have their children taking part in the pilot study and many of them compliment us for helping their children noticeably improve in oral English ability."

"The use of the Fries-Rojas Aural-Oral English material presents a systematic, effective method of teaching English to Navaho children. It is not a kind of magical trick in which we say a secret word and everyone spouts perfect English. It is simply a practical method of correcting and improving speech habits, an effective method of introducing new speech patterns."

We may conclude from the above quoted comments that the pilot study has been a profitable experience for the Navaho children and for the teachers engaged in it. There is general agreement among the teachers that the project should be continued.

PHONOLOGICAL CHARACTERISTICS OF SOUTHWESTERN INDIAN LANGUAGES

Dr. Edward P. Dozier

While Southwestern Indian languages differ greatly from a genetic point of view, that is in terms of derivation from a common parent language at a not too distant past, these languages have many common phonologic features. In other words, while the way words are made up and the way words are organized into phrases and sentences differ, there are similarities in the sounds employed among all of the Southwestern languages. This is not to claim that we can use the same sound system developed for one language and apply it to all the others. This is not possible. For the benefit of the technical linguist let me put it this way, a single phonemic system is not possible for all Southwestern Indian languages, but mutually exclusive sounds in one language may exist as included sounds in another - hence sounds may have the status of phonemes in one language, but exist only as allophones in another.

This is not a paper for the technical linguists, it is specifically addressed to the teacher teaching English to Indian students. If the English teacher learns the basic sounds of Southwestern Indian languages he can be extremely helpful to the Indian student learning English. It is not a formidable task for any one to learn the basic sounds of Southwestern Indian languages. Actually a good knowledge of these sounds can be acquired in a few hours of demonstration followed by a similarly short period of practice in reproducing the sounds.

Once familiar with the sound system of Southwestern Indian languages, the teacher can see why an Indian student coming from a monolingual or predominately mono-lingual environment makes the kinds of mistakes he makes in speaking English. We all, of course, transfer our habitual pronouncing habits to any subsequent language that we learn. The tendency, everywhere, is to equate the nearest sound found in one's dominant language with that of a second language being learned. This is precisely what the Southwestern Indian does and hence has difficulty in pronouncing English "properly".

Learning another language well is, of course, much more than simply mastering its sound system. Yet, once a student learns to produce sounds correctly he develops the motivation to learn the other necessary rules of morphology and syntax that means mastery of another language. The confidence gained from learning a language properly has far reaching social and cultural consequences which facilitate the student's eventual adjustment to the dominant society around him. On the other hand, faulty pronounciation often leads to frustration and despair in the student. Often the student is so discouraged that he may lose the motivation to go on since schooling appears to be simply a series of disappointing experiences. Mastery of language skills is undoubtedly one of the most important ways of feeling secure and confident in another culture.

I want now simply to call attention to the characteristic Southwestern Indian sounds.

Lets examine first the STOPS b, d, g; p, t, k. The first set b, d, g are voiced and unaspirated and do not differ substantially from the corresponding American English sounds. The second set, however, differ from the English equivalents in that they are unaspirated or only slightly aspirated and to the ear of an English speaker they sound almost like the first set. Thus pot sounds like bot, top like dop and cot like got. The Indian student would have to be drilled to pronounce his voiceless stops as distinctly aspirated.

In virtually all Southwestern Indian languages along with the b, d, g; p, t, k series there is a GLOTTALIZED series p', t', k' which is, of course, not found in English. Glottalization is accomplished by articulating a stop like p, t, k while at the same time closing or constricting the glottis. Substitution of this series for the English voiceless series happens, but it is rather rare and even the untrained teacher can detect it so that it is quickly corrected.

The glottal stop ʔ in English occurs only rarely in pauses like oʔo, aʔa, or in the pronounciation of the word bottle as bʌʔəl. In southwestern Indian languages, however, the glottal stop is an important feature of the phonology. It usually precedes all words that begin with a vowel, and in final position it is frequently employed in making meaning changes in otherwise identical words. For example, in Tewa pà. means to extinguish (as the flame of a candle), but pàʔ means string or thread. Influence of the glottal stop is evident in the Indian speaking English by making his utterances sound choppy or hesitating.

The SPIRANTS alveolar s, alveolar z (voiceless and voiced respectively) velar voiced j (g), alveo-palatal voiceless sh and more rarely a voiced equivalent of sh (zh) also occur. These are similar to English equivalents except that there is an accompanying breath release which is not characteristic of the corresponding English sounds. Corrective measures by the English teacher should consist of drills to remove the breath release.

x and h (voiceless velar and voiceless glottal respectively) are frequently interchanged. These sounds are characterized by pronounced friction, considerably more than the English equivalent of h as in how. In some Indian languages, notably Navaho, x occurs as voiced gh. English teachers will need to drill the Indian student to articulate x and h with less friction and to unvoice these sounds if they are voiced in his native speech.

Somewhat rarer in the Indian languages of the Southwest are the following spirants: v and f which vary between labiodental and bilabial and respectively voiced and voiceless. Even rarer is the voiceless interdental th, the voiced version apparently does not occur. Another fairly uncommon sound is the voiced alveolar trill ɗ (similar to the mid-Western English trill as in butter). Equally rare is the retroflex voiced r similar to the English equivalent. Where these sounds do not occur in the native language, Indian students may need extensive drill to produce partially equivalent English sounds.

Of the AFFRICATES, that is combination of stops and spirants, those commonly found are ts (combination of t and s); ch (combination of t and sh, e.g. English initial sound in child); dj (combination of d and j, e.g. English initial sound in judge).

In addition to the Glottalized Stops already illustrated, glottalized sounds consisting of a combination of spirants and affricates may also occur, such as k'y (combination of glottalized k' and palato-velar y), c' (combination of glottalized t' and alveolar voiceless spirant s), ch' (combination of glottalized t' and sh).

The NASALS m, n, and ng are respectively bilabial, alveolar, and velar and pronounced like English equivalents. In some of the Shoshonean languages ng, unlike English, occurs frequently in initial position (syllable or word). Nasals should not present difficulties to the Indian student learning English.

Most Southwestern Indian languages have the LATERAL continuant l which corresponds to the English equivalent. In addition, however, there is frequently a voiceless version ɬ. Combinations of d and l (dl) and of t and ɬ (tl) are also common.

SEMIVOWELS w and y (bilabal and palato-velar voiced respectively) are comparable to English equivalents and should not trouble the Indian student.

The range of VOWELS are narrower in Southwestern Indian languages than in English. The vowels are usually a front unrounded series i (lower high), e (higher mid) and ae (lower mid) and a back rounded series u (lower high) and o (higher mid). The vowel a is a low central unrounded, occuring as such with little variation in all Southwestern Indian languages. Shoshonean languages as well as some others also have a central unrounded vowel. This central vowel is similar to the final vowel in English words like letter, supper and the like.

All of the vowels occuring in American Indian languages of the Southwest occur in English except that e and o tend to be diphthongs, as for example eight, bait; and oil, boil.

In some of the Indian languages these vowels occur as unvoiced, particularly in final position where they sound to English speakers as "whispered".

Most Southwestern Indian languages modify or change the quality of vowels by three techniques: elongation, tone and nasalization. Thus in Tewa, t'òh is pinon nut; but t'oò (vowel elongated) is the pinon tree. Tone may run up to four registers, a high báa, a low baà, and a rising-falling as baâ. In addition there is usually a middle register between high báa and low baà (left unmarked in transcriptions). All vowels may also be nasalized - thus i į; e ę; a ą; and so on. These features of of Southwestern Indian languages give a kind of melodious quality to the English of Indian speakers.

The teacher of Indian students must drill the student in those vowels which are absent in his language. Special attention will be needed for diphthongs which are rare in the native languages and give considerable trouble to Indian students. The tonal quality of an Indian's English speech is not a deterent to communication, although the Indian may want to remove this quality in order to speak a form of English which will not tag him as an Indian. Constant drill and the use of tape recorders can help to minimize or overcome the phonological features of his native speech that modify his English speech.

This brief outline presents only the general phonological features of Southwestern Indian languages. Morphology and syntax is enormously complex, not only when compared to English but the various Indian languages also differ considerable from one another in this respect. While it is possible to learn the general characteristics of Southwestern Indian phonology, an understanding of the morphology and syntax of these languages will require an enormous investment of time.

THE LINGUISTIC APPROACH IN TEACHING GRAMMAR AND COMPOSITION

Dr. Elinor Clemons

At Arizona State College I teach a course entitled English for Bilinguals. Since the course serves primarily Navajos (and a few Hopi), the group is quite homogeneous. But I am rather sure that the course is a misnomer, for hardly any of these students are bilingual in the strict sense of the term. Many of our Indian students, like Janus, the two-faced Roman god of entranceways, stand culturally on a threshold viewing the old culture with skepticism and finding many barriers to acceptance in the new culture. One of the big barriers between them and the new is, of course, language. In fact, some of this present generation of students are in a linguistic no-man's-land. One of my students recently told me that while she lives with several other Navajos and they traditionally speak Navajo among themselves, the other girls frequently tell her, "You say things backwards in Navajo — better talk to us in English". The sad thing is that she has a shaky command of English, is in fact a straight 4 student in English for Bilinguals. She blames part of her trouble on the fact that she has a Hopi grandmother and apparently as a little child acquired a knowledge of both Hopi and Navajo, but never became proficient in either.

Another student, a woman in her forties, served as an interpreter for a professional classroom teacher for several years, and is now working for a teaching degree. But in spite of all her experience, I have found out indirectly that she has never learned to "think" in English. When asked to write an in-class theme, she goes through her thought processes in Navajo, translating into English. The results, of course are obviously disappointing. She can learn a point of grammar in isolation and reproduce it on a test, but integration of grammatical principles in practical application is apparently not within her grasp.

Many of these students cannot be considered stupid, nor, on the other hand, are they brilliant, self-motivated people who will virtually teach themselves. Probably for the most part, the students we deal with are of average or above intelligence, with a medium degree of motivation. The thing which keeps many of them on scholastic probation is a language deficiency. Yet their very problem they frequently refuse to face up to, and they steer away from the courses which will help them most. One Indian girl, a freshman, told me that the greatest help she had gotten with English was from a speech teacher in high school, yet one of our speech professors informs me that the Indian students, knowing they have speech problems, will stay away from courses in his department. Likewise, if they can get by in freshman English without taking English for Bilinguals, they will do so. Unfortunately, many find themselves in trouble in nearly all their courses after a semester of this kind of evasion. They write poorly, they are afraid to speak up in discussion groups in their classes (probably because of a knowledge that they are deficient in ability to do so), and they cannot begin to keep up with reading assignments which are intellectually beyond them. Not only have they never been exposed to many of the sophisticated ideas concerning morals, art, religion, and so on, which they might be asked to read and comprehend; their deficiency is even more basic; their reading level is so low that they can't even begin to fathom the vocabulary of the reading selections.

Thus the Indian student poses his own special problems. He is not like many foreign students who probably were good scholars and even entered into competition with fellow countrymen for the scholarships which enabled them to come to the United States to study. Nor is he too akin to the people in remedial English programs who are frequently either intellectually slow, or lazy and unmotivated. This much is true, however, of some remedial and some Indian students: both may have serious emotional barriers to self-expression. The Indian student, then, seems to have his own set of difficulties in language learning.

His problems are often those of the foreign student in that he hasn't mastered completely the sound system of English, and frequently his English is unidiomatic. So in some cases he may be helped with exercises and drills designed for advanced foreign students. But unlike many foreign students, the Indian may be quite fluent in a rather slangy brand of English, so fluent in fact that his proficiency in a substandard brand of English is a real barrier for him to overcome in speaking or writing at the college level.

If we compare the Indian with the remedial English student, we again find a difference. Probably the biggest problems facing the remedial student are 1) inability to express himself in writing because of lack of practice or lack of ability, 2) lack of a knowledge of spelling and mechanics, 3) lack of sentence sense. Some Indian students have a better-than-average ability to express themselves in writing: their ideas are frequently vivid, concrete, and original. Where they fail in expressing themselves is in their lack of vocabulary items, in their misuse of English idioms. As far as mechanics and spelling are concerned, the Indians I have worked with as a rule do a better job than the poor-to-average native speaker. If they don't know the rules of punctuation, for instance, it seems a minor matter to teach them. In spelling, the average Indian student is as good as or better than his native-speaker counterpart. As for sentence sense, if the Indian student happens not to have it, he can develop it as readily as the native speaker who lacks it.

Specifically, then, what are the Indian student's problems in learning grammar and composition, and how can we help him? The principles which I would suggest as applicable to the situation are not necessarily modern linguistic discoveries, but procedures which sound teaching has applied for years. The linguistic approach simply makes the task easier for all concerned.

The Indian bilingual entering college has his own peculiar deficiencies in the communication skills of READING, LISTENING, SPEAKING, and WRITING. Because all four of these skills are important, and because they are all closely related to one another, the integration of them seems the best possible way to teach grammar and composition.

First of all, in reading the bilingual is generally sadly lacking in vocabulary and in the cultural background which is necessary to understanding much of the literature he is expected to read. Biblical and mythological allusions, for example, frequently mean nothing to him. For that reason, the Indian student cannot easily comprehend the material offered in a regular Freshman English class. How can he discuss freely, analyze a piece of writing, or write an essay on a related subject when he has missed possibly the general interpretation, and certainly the overtones of satire, indirect implication, connotation, etc. Therefore, unless he can satisfactorily pass a reading comprehension test, he does not belong in the regular Freshman English class.

Directly related to his lack of comprehension of what he has read is his lack of ability to understand and participate in discussion about the reading material. Hard as he may try, he can at best learn superficially such things as the names of characters, the plot of a short story, details of incidents from the story. Due to his lack of comprehension, his time spent in listening to his classmates and instructors is frequently wasted.

Thirdly, his general reticence to express himself orally is a handicap not only to his grades, but also to his other communicative skills - I believe there is a distant correlation between ability to express oneself in speaking and in writing. In other words, by depriving themselves of the oral exercise of expressing themselves spontaneously in discussions, they are neglecting the opportunity to develop an important skill -- the ability to think through an issue swiftly, accurately, arriving at an intelligent conclusion. This sort of practice can and does lead to better written expression on in-class themes, and the skill thus developed has the obvious practical end of helping the student write essay-type answers on quizzes in many courses.

Lastly, if he is expected to take the next step, to write about what he has read and discussed in class, his most valiant efforts are at best far short of the desired goal.

Assuming, then, that the bilinguals needing special help have been assembled on the basis of placement examinations and need to be taught something about English grammar and composition, how do we begin? The obvious way is with the skills they already possess, at the level they possess them.

Since the skill of speaking a language is recognized as basic to the skills of reading and writing it, and since speaking is the language skill at which even these people are the most proficient, it would seem logical to begin with it as a basis for procedure. But what can we say specifically about the Indian student's ability with English? Although he speaks English, it is usually a substandard brand which is not very helpful in his intellectual pursuits at college. Formal English of the type found in most textbooks is very nearly a foreign language to him. His vocabulary is limited, and his very fluency in substandard English may actually be a handicap to him when he tries to write acceptable English sentences for a formal, or even an informal theme. Furthermore, he generally is very reticent at the beginning about revealing his deficient English to the instructor. He will either refrain from answering even when he knows the answer, or will answer in monosyllables, incomplete sentences.

In order to get him to practice verbal skills, it seems necessary, then, to give him reading material on his level which he can understand and about which he can answer questions intelligently, material which ideally is accompanied by study aids such as questions and vocabulary-building exercises. Some of you have already guessed that the type of material I am talking about is high-school level, and you are correct. If possible, the material should be supplemented by pictures, either in the text or provided by the teacher. The next step is to get the students to discuss freely the material they have read, to identify themselves when possible with characters and issues. This procedure is related, of course, to the linguistic principle that speaking is the basic skill. The instructor can also find out through discussion what particularly interests the students and what they might be capable of writing about. Also, the practice of writing out (as an in-class quiz) some of the study questions they were to prepare for oral discussion is another possibility for correlating oral and written skills.

Under these favorable circumstances, there will always be a few in any class who will prepare lessons well and contribute to class discussions. (Incidentally, the grouping of people in a circle for discussions seems to contribute to informality and ease among the participants.) The more backward students, while they may very seldom contribute to the basic interpretation of a selection, will at least answer some questions and contribute a small bit. They listen to and understand their peers, and acquire at least a minimal increase in communicative skills.

In regard to speaking and listening skills, I tried an experiment last semester. At each class period one student was asked to read aloud, for recording, part of the assigned reading selection; the recording was played back immediately and the student and his classmates listened and commented, both favorable and adversely. The method, however, was rather time consuming for a two-hour course, and we were not equipped to require the students to do recording practice outside of class. But two interesting, helpful things learned from this practice were 1) some principles of punctuation, and 2) something about English intonation patterns. In other words, the students learned to HEAR commas, periods, the intonation patterns of exclamations, questions, and so on. They were able to make some correlation between the marks they saw on paper and the junctures, stresses, and pitch changes they could hear in the spoken word. To some extent there was a carry-over of this knowledge into written work. Most of the students were able to recognize their own gross deficiencies and would have, under an intensive program, made considerable improvement, I believe.

Although the reading selections are important to oral expression, they are also a great aid in improving writing. From a practical standpoint, since expository reading and writing are of most value to the student, they are what should be taught to the bilingual. Because one of his biggest deficiencies is in vocabulary, the reading selections should give him vocabulary-building exercises. These isolated lessons can be summarized and used to teach some general principles about vocabulary-building in English. For example, since February we have had short lessons on suffixing with each reading selection. Recently I tried to integrate the principles of suffixing by presenting a lesson on the use of suffixes to form the four major form classes in English: Noun, Verb, Adjective, and Adverb. The principle is simple enough to understand: with a given word base, one can form various parts of speech in English by adding derivational suffixes. Given the adjective *legal*, for example, we can by suffixing derive the noun *legality*, the verb *legalize*, and the adverb *legally*. Once the students have learned the principles and exercised them on a worksheet at home with the aid of a dictionary, they can in the following lesson be given lists of the most commonly-used suffixes in English for the three major classes of words — Nouns, Verbs, and Adjectives. For the Adverb, of course, *-ly* is the only derivational suffix. By putting these principles into practice, the student can independently make progress in vocabulary building.

Inevitably at this point a review of inflectional suffixes in English must take place, for some students will confuse derivational suffixes with inflectional suffixes. Thus, when asked to make a verb from the adjective *light*, instead of writing simply *light* without change, or *lighten*, they will write *lighted*, or *lights*, or *lighting*. The inflectional endings in English are, of course a perennial source of difficulty for bilinguals, and need to be reviewed periodically. But the problem is more fundamental than automatic recognition and resultant proper usage. In Navajo, for instance, noun forms can be used as verbs without any modification whatever, under certain circumstances. The Navajo language is said to be verb-centered as compared with the English language which is noun-centered. The differences in language are due to differences in culture; the Navajo view of the universe and man's part in the universe is different from ours. A one-to-one correspondence between their tense system and ours is of course non-existent, and the problem of teaching inflectional endings on verbs, then involves the more fundamental one of explaining our concept of time.

Although the simple tenses have generally been mastered by all but the poorest students at the college level, many students have trouble with the use of auxiliary verbs. Particularly treacherous is the construction with the verb *to do*. Very often sentences like this come out, "I did studied my lesson thoroughly" or "Later I found out that they don't allowed us to go to school". Obviously these are cases of over-compensation; the student has been drilled in the necessity of using the *-ed* ending to indicate past time, and he recognizes these examples as instances of *past* time. Probably the best way to handle this situation is to teach the emphatic forms with the verb *do* side-by-side with the simple preterite forms in *-ed*.

The *-ing* form of the verb is not troublesome if properly taught. Last October I visited a seventh grade class in the Flagstaff school system where the teacher was presenting a review lesson on verb forms. After having told the children that verb forms could frequently be recognized by such endings as -ed and -ing, the teacher asked the pupils to identify the verbs in a list of sentences in their workbooks. When it came time for an Indian boy to identify the verb in this sentence, "At the beginning of the show the circus barker announced the acts.", he said the verb was the word beginning. In other words, on the basis of the information he had at hand, the boy was making an intelligent guess. He just didn't have enough information. In teaching the -ing form as a verb, one necessarily needs to teach it in conjunction with the auxiliaries which always precede it.

And in presenting the -ing verbal form for advanced students, it is always helpful to teach the usages of the -ing words as adjectivals or nominals: Fish were swimming in the pond. His swimming trunks were torn. Swimming is her favorite sport. The signals which show that each -ing form in the sentences above functions differently are easily recognized. In each case the -ing form fills a slot in the sentence recognized as a nominal, an adjectival, or a verbal slot. For example, swimming fills the adjectival slot in the sentence His swimming trunks were torn because it is preceded by the determiner his and followed by the noun trunks.

Needless to say, the same procedure works with the -ed ending, so that there is no problem in training students to recognize the difference in function between the -ed form when it fills an adjectival slot and when it fills a verbal slot.

What might be anticipated as a difficult aspect of verbs to teach is the relationship between active and passive voices in English. But at least for the Navajo this has not been a problem area at all. Apparently there is a close relationship between the elements of the sentence in Navajo and in English, in the way they enter into the transformation from active to passive voice or vice versa. That is to say, the subject of the verb in the active becomes the agent in the passive voice in both Navajo and English. In the sentence, Jim shot a bear. converted to A bear was shot by Jim., the subject Jim becomes the agent by Jim through the conversion. Likewise, in both Navajo and English, the object of the transitive verb, active voice (in this case bear,) becomes the subject in the passive voice: A bear was shot by Jim.

What seems to be one of the more difficult aspects of our verbal system, insofar as the Indians are concerned, is the idiomatic use of the progressive and non-progressive tenses, along with a feel for the proper sequence of tenses. Drawing a time-line on the board and explaining our culture's point of view regarding time seems to be a profitable way to begin. Teaching the progressive and non-progressive tenses requires stressing the durative, habitual, inceptive, terminal, and other aspects of the tenses, and also necessitates a great many drills and written exercises. But the conscientious student who learns the tables of tenses given in a grammar book still doesnot have all the information he needs to speak and write idiomatic English. Take for example the future tense, listed as follows in a table of tenses in a grammar book:

I shall teach	We shall teach
You will teach	You will teach
He will teach	They will teach

In the first place, no one except English teachers is vitally concerned with the distinction between shall and will, and in off moments even they slip at this point. So why bother to teach a distinction which is not made in speaking and even in much writing by people who are considered well-educated? What seems more important in the future tense usage is to add what many grammar books fail to point out, that English has other ways besides this one just indicated for expressing the future tense, and the other ways are, in fact, probably more used than this future. Thus, it seems rather stilted to use the future tense in the following question and answer: "What will Jack do tonight?", ANSWER: "Jack will study." The average speaker (and writer) will here probably say, "What's Jack going to do tonight?", ANSWER: "Jack's going to study". Other ways of saying approximately the same thing are, "Jack hopes (or Jack plans) to study tonight."

To make matters even more confusing, we also use the simple present tense on occasion to express what is clearly future time. Thus, in the statement: "We give our first performance next Tuesday.", future time is clearly intended, indicated by the words next Tuesday rather than by the present tense verb give. What is more, we even use the past tense to express future time, as in this example: "If you studied tonight, you might pass the test tomorrow."

The same sort of situation holds true for our other tenses in English, and it is these idiomatic uses of language with which the Indian student is not totally familiar, and which he must learn through practice and drill. In such usages as this, it would seem important to work for a correlation of speaking, reading, and writing practice, for what the student learns he will best retain if he uses it, not only in writing but also in speaking.

The same principles which have been discussed in relation to teaching verbs can also be used for teaching other parts of speech and for presenting the structure of English sentences. The bilinguals as a group have a pretty fair understanding of the structure of an English sentence, although they occasionally omit an a or the, add one where it is not needed, or misuse grammatical agreement.

Unusually successful in introducing parts of speech and English word order is the use of nonsense sentences and verse, of the type made famous by Lewis Carroll's "Jabberwocky" in Through the Looking Glass. This device is not new with linguists, but is always refreshingly new to me when I see how quickly students catch on to recognition of parts of speech and to the limitations on word order in English. I find it useful to present this type of lesson on form classes and structure of English during the first semester, and to review it the second semester, making further explorations into English structure.

I should say, then, that in teaching grammar and composition one needs to present them not as isolated skills, but as functions of language. One needs to remember that oral expression is basic, that written expression is secondary, a different dialect, generally more formal than the spoken word. And while the measure of success attained in teaching these aspects of language is frequently limited by many factors within the students, for those who sincerely want to learn, I find the linguistic approach extremely satisfactory.

THE IMPORTANCE OF LINGUISTICS FOR TEACHERS OF INDIAN YOUNGSTERS

Dr. J. J. Lamberts

In order to demonstrate why linguistics is or may be important in teaching Indian youngsters, one needs to consider first of all what happens when the teacher has no linguistic preparation at all. Linguistics, as we should realize, is an extremely elastic word and it may apply to anything that has to do with language, generally or specifically. In recent years descriptive linguists have run off with the term so that being a descriptivist and being a linguist mean pretty much the same.

For a moment I should like to ignore this definition and consider the very minimum of language sophistication. We may be astonished to discover how little of this some persons possess. I am thinking, for instance, of a woman in Chicago who was surprised when I mentioned people speaking languages like Spanish or Polish or Swedish. She knew some of them did, but it had never occurred to her to wonder why. To such an individual — and there are thousands of them — a foreigner (or American Indian) can speak English if he really tries. One shouts louder or talks more slowly or drops into a kind of baby talk. By the law of averages some of these people must have ventured into teaching the Indians, but one can vision nothing except complete frustration on both sides.

Another type of person calls himself a linguist who is actually a polyglot. He may be a descriptive linguist; he may not. The two have relatively little relationship. Such an individual has a smattering of two, three or fifty languages, as the case may be. He can count to ten, ask one's health, date a girl, and order something to eat. Such matters have a kind of subsistence usefulness and we may envy people who possess this agility, but it is like the seed that had no depth of earth. The polyglot is often at a disadvantage where more than hit-and-run linguistics is required because he is capable of dealing with nothing more than a variety of unsystematized snippets of language curiosities.

A third person will perhaps disdain the title of linguist for the reason that he is a grammarian — a traditional one. To him, language study consists of finding parts of speech, of laying down rules of correctness. For such a person language consists of a variety of things to be committed to memory and mastery of a language is measured by the ability to answer questions about random facts about language rather than an ability to use it like a native speaker. In some situations such a person may be useful, but in dealing with Indian languages which bear no resemblance whatever to traditional grammar, the result is once more bafflement.

People like these have, of course, participated in teaching Indian children. Unless there has been a sudden and unannounced change they are still with us in great numbers. The results are what we should expect — catch as catch can at best. Now

I am not an evangelical linguist in the sense that I look on linguistics as the hope and salvation of Western civilization. But it seems to me that when and where we have this resource we are doing ourselves and our students a disservice to ignore it. Primarily, to be sure, we should expect those who are English teachers to need the techniques of linguistics, but some of the understandings are profitable to all participants in Indian education, including bus drivers and manual training instructors.

Linguistics is, as we know, a scientific approach to language. It applies to language in general in the sense that there are procedures which apply more or less to any language one may name. But it applies to every language in particular because every language requires a unique analysis. In other words, there is no universal grammar which we learn once for all and then apply with minor variations to everything from English to Swahili. We used to do that with Latin grammar and often still do. When I say further that linguistics is scientific I mean that it is systematic. The investigator endeavors to discover basic regularities within a given language, to codify them, to identify the exceptions, and then to check the validity of his statement.

In one sense people have been linguists ever since the first human beings began to talk, and more especially after they started asking questions about talk. But in recent decades we have learned that there is no such thing as universal grammar at all. In other words, the notion that knowing nouns and verbs and phrases is somewhat a major item of relevancy in language learning — this we have tossed out. Instead we have come to understand that every language is in a sense unique and that people express meanings by quite different devices. Indeed, categories which are very important in one language are rather trivial and wholly optional in another. That is to say, languages are structured differently.

Let me give an example of structure. In English we depend heavily onthe notion of plurality in our system of nouns. Not only may we pluralize nouns, but we are obliged to, because this is one of several devices by which the speaker of English employs to identify the noun within the larger utterance. There are several such devices — the word the, for example, and certain positions within the sentence itself — but we depend very much on plurality. Also it is a device by whichwe tie our nouns to their respective verbs. Now it is possible to ignore the matter of plurality and to use only singulars, or worse, to use singulars and plurals entirely at random. The result is confusion. People don't understand what is being said and they often become angry.

But over against English is Navajo in which plurality is not systematic at all. In order to show plurality the speaker attaches a number or general quantifier to the noun and this does very well. On the other hand, the Navajo youngster learning English is required to consider as obligatory a distinction that he always regarded as optional and this is not easy to do. Teachers who tried to make these children learn conventional English have supposed that the children must be stupid to ignore such a basic matter. It is not stupidity at all, but a transfer to a completely different structure.

Not until the teacher realizes that plurality is a structural feature of English for which Navajo offers no parallel is there much chance of doing any systematic teaching. In fact, one's teaching depends on a reasonably accurate picture of the way English operates as a language. We have often ignored this. We have imagined that the ability to parse an English sentence into nouns, verbs, prepositions and so on was vital to knowing the language. Navajo or Papago or Hopi were primitive languages. If one knew the Indian words for various things and actions the rest of the language somehow took care of itself and further it did not much matter. The truth is that as teachers of English we do not have to learn Navajo or other Indian language, but the composition of that language does matter a great deal for the simple reason that this is what the speaker of that language uses in order to discourse. It constitutes a set of habits which are very deeply ingrained. He can learn scores of new words, possibly a completely new vocabulary, but to be competent in his new language he needs also and above all to master the structure of that language.

This structure operates on several so-called levels. One of the first ones is that of the sound system. Those of us who have worked with Navajo realize that the speaker of that language employs quite a few sounds which speakers of English never produce except by accident. Speakers of English, on the other hand, find that for intelligibility they are required to make a number of sounds which the Navajo never uses and which in any case never constitute a minimal distinction between words. Sounds like /r/ or /p/ or /e/ have no more significance for him than the glottalized affiricates of Navajo have for us. Where English has nine primary vowels and numerous diphthongs, Navajo has four primary vowels and no real diphthongs. English has no long vowels in contrast to short ones; Navajo does. English has stress; in fact, three and possibly four stresses. Navajo has none. English has sentence melody consisting of predetermined tones on specific parts of a phrase or larger utterance; in Navajo tone is an integral part of a vowel.

A second level of structure is the grammatical. It has to do with marking the various parts of an utterance in relation to one another, identifying, for example, who or what is responsible for a particular state of activity, what the nature of that state or activity happens to be, and sometimes, what is the general result. Thus in English we have a subject, predicate and object. The identical word form may be employed in any of these three positions with nothing more than a change of position or marker. We can do the same thing in Chinese. But it is not possible in Latin or Navajo. These and many other matters the linguists have sought to describe in some detail.

A third level we may call lexicon or vocabulary. Not only is there no one-to-one correspondence between languages, but often one's vocabulary distributes the universe of experience quite differently. Colors in English tend to be abstract. Even a color like turquoise or violet or chartreuse presently dissociates itself from a stone or flower or liqueur and becomes an independent color. In Navajo a color is much more closely attached to a thing which has that color. It is a part of language study that we still know relatively little about, but we are gaining, and once more the linguists have made the greatest headway here.

As teachers we can never wipe clean the slate of from six to thirty years of language learning and then start over fresh. We have to work with the habits of these years; for every new one we instill we have to break an old one. The reason I regard an acquaintance with linguistics absolutely essential to a teacher is that the teacher needs to know what is going on. He is always improvising and always confronting unexpected situations. A human being is not an IBM punch card but a cluster of complex habits and attitudes.

As language teachers we are not dealing with facts at all, but with complicated skills. A person uttering a ten word sentence has called into play as many muscles and neural reflexes as a man who chops wood for eight hours. Often we try to measure language competence as though it were a body of fact, as though being able to fill a work-book or supply true-or-false answers could enable us to determine by a number grade whether one person is more competent than another.

By being linguistically sophisticated I mean knowing something about the way one's own language operates plus the way other languages are likely to operate. Such sophistication permits the teacher to provide his students with the most efficient possible approach to learning the language. It calls for organizing material, for arranging it in order perhaps of difficulty or of usability or the fact that is happens to be fundamental to many things which follow. Now in order to be able to program material in this manner the teacher has to know how language is put together, but just as importantly what will happen if he ignores certain fundamental facts about language in general. Not only will he do this in teaching the relevant sounds of English as compared to those of the mother tongue, but he will do it in teaching structures like statements, requests and questions, or such elaborations as predication, modification, and the like. No matter how brilliant or personable a teacher may be, he will not know such things by himself. They have to be learned as an independent discipline. And only after he has learned them can he apply them. That is why linguistics is important to those who essay to teach speakers of other languages, whether young or old.

AN ANALYSIS OF THE READING ACHIEVEMENT OF NAVAJO STUDENTS

Maunelle Martin

This study was initiated last spring, in May to be exact, following the administration of achievement tests to all children in the Window Rock Public School, District 8, Fort Defiance, Arizona. The general purpose of the investigation is to determine the status of Navajo children in reading, not only the scores interpreted at grade placements but a specific break-down into the separate sections of the test under the categories of vocabulary and comprehension. It is the opinion of the investigator that there is insufficient research in the field of reading achievement of Navajo children in public schools on the reservation. This factor has been caused by the infancy of public education on the reservation and the lack of testing programs within the schools. This study was made possible by existing conditions; a reservation public school that had been in operation eight years and a school that has had a consistent reading testing program for six years. With such a study as this available to educators who have within their system Navajo children, it is the hope of the researcher that these results will serve as a challenge to further study in order to improve reading instruction, to stimulate a keener awareness of the reading problems of bilingual children, to determine specific areas of weakness in our instructional programs, to provide remedial work at all levels, and to search for better teaching methods for Navajo students.

Window Rock Public School has a current enrollment of approximately 1500 students with 90% of those youngsters of Navajo descent. At the present time the staff is composed of 74 classroom teachers and 6 administrators. In a budget of $1,630,000 the best of facilities in the way of school plant and instructional materials is available to the teachers. All teachers are certified under the state laws of Arizona, and the high school will receive its North Central rating with the beginning of the next school year. Each year about 50% of the staff is engaged in some form of in-service training. The administration encourages attendance of staff personnel at professional conferences and workshops to improve instructional methods. Of the 1961-62 staff members eight are Navajo, four others are bilingual, and 70% of the remainder have two or more years of foreign language training. Thus, a large portion of the faculty has been exposed to more than just a native language, which should create a sympathetic attitude toward the non-English speaking child and his difficulties in learning a second language. In a contrasting line of thought, besides the eight Navajo teachers, only one of the remaining teachers knows the Navajo language and its structure. In examining the placement of the Navajo-speaking staff members two are in the primary grades, two in the intermediate, three in junior high, and one in high school. No investigation has been made in this school system to determine whether this type of instructor is more effective than the person who knows nothing of the Navajo language. These points are presented to give the reader a better overall view of the school situation.

Two years ago a remedial reading program was begun with one instructor assigned to grades 2-6 and another for the upper six grades. As many children as possible are involved in the two sections (80 and 120).

Included in the study are children who are of one-half or more Navajo descent. All others are excluded. The number in this classification is 945. The instrument for measurement is the California Achievement Test, and scores of children in the first through the eleventh year were checked. Raw scores were tabulated, means were determined, and the means were translated into grade placements in order to make diagnostic profiles.

Under this particular testing program children in grades 1-3 are given one battery of tests; grades 4-6 another battery; grades 7-8 another battery; and grades 9-11 still a different set. This study is in no way designed to propose the efficiency of California Achievement Tests as a true measure of Navajo reading ability, for most educators agree that they are not culture-free tests, but at the present they are perhaps the most widely used and accepted. They do give us some sort of measurement whereby we can draw certain conclusions.

Table 1 shows the distribution of children by grade assignment that are included in this study. Grades 1 through 11 are listed. These were included because all had a common condition: that is, they would be in school the coming year. Often twelfth year students have a lackadaisical attitude, realizing that their work in high school is over and often fail to put forth their best efforts at testing time (May).

One advantage of the timing of the study is that all tests were given under normal situations with no anticipation of a research project or desired results to be shown by testing.

The first series of graphs show the frequency distirbutions of each grade level using total reading scores as interpreted into grade placements. Figure 1 displays the first grade scores. Here we see a better than healthy curve with the majority of students well above grade level and a range of +1.7 to -.9.

Figure 2 is an impressive chart from which we note again the majority of children appearing well above grade level. The range here is from +1.8 to -.4.

Figure 3: The curve begins to shift somewhat to the left, but still the proportion is not to the extreme. The range +1.8 to -2.6.

Figure 4 shows scores of youngsters who normally should rank at the 5th year level, and the curve is beginning to drop well below the ideal mean. The range: +1.8 to -2.9 for a total span of 4.7 years.

Figure 5 gives the same picture, only more pronounced, with a range from +1.3 to -2.7.

Figure 6 is the kind of situation that hits an educator with great impact. These children should be near the 7th grade norm, yet at this level no child ranked at level or above and the range is from -.2 to -3.5. What conditions exist during the sixth year that are peculiar to this grade level and could make a difference in the achievement of Indian children? The answer might lie in two situations: (1) There is the transition from the self-contained classroom to departmentalization, and (2) there is the breaking away from a more established reading program as is used in the lower grades.

Figure 7: The end of the seventh year shows some recovery seems to have taken place, for again some students (10%) rank at or above grade level. Range: +1.4 to -3.2.

Figure 8: At the end of the 8th year only 4% of the students are at or above grade level with the range extending from +.3 to -3.8.

Figure 9: At the end of the 9th year 8% are at or above grade level with the range from +.8 to -4.5, thus increasing the range to 5.3 grades.

Figure 10 shows a range with no more than 3 frequencies for any one score point. The curve of distribution, if projected, would be almost flat. The range is +1.9 to -4.7 to give a total span of 6.6 years.

Figure 11 is only slightly different from the pattern of the preceeding chart. Range is +1.2 to -5.4 with the span of 6.6 years.

It was the desire of the investigator to determine weak areas in the child's reading achievement. The next series of graphs are plotted for this purpose.

Figure 13 shows groups that should rank near the 2, 3, and 4th grade norms, and the means for each division of the test are graphed. During the first year, the child seems to achieve less in the knowledge of opposites; the second year he falls behind in word form; the third year he ranks lowest in following directions.

In Figure 14 the fourth year student ranks lowest in word form; the fifth and sixth year drops are seen in the field of opposites, word recognition, and similarities.

Figure 15 illustrates the ranking of the five upper grades: the seventh year the lowest mean is in mathematics vocabulary, the 8th year the student is retarded most in reference skills, while the 10th, 11th, and 12th grader is far behind in social science vocabulary.

This type of graphing within a school system with a program of testing should help to pin-point existing weaknesses and through an awareness concentrate on these to improve the achievement of the child.

It was possible to include in this study scores of 31 children who have been enrolled continuously and tested for six consecutive years. The means on the basis of vocabulary and comprehension are given in Figure 16. The results are plotted from tests given at the end of the first grade, proceeding through the end of the 6th grade. Factors entering for consideration are: the same instruction and facilities, approximately the same chronological age, no retentions, no transferring from one school to another, six years in a public school on the reservation, and all reside within a fifteen mile radius of the school. From the information, please note that the mean at the end of the second year is at grade level; at the end of the 3rd year the drop begins, and retardation continues until the end of the 6th year showing a -1.6 grades in comprehehsion and -2.2 in vocabulary.

What conclusions can be drawn from this study? The average Navajo child progresses at a normal rate during the first two years of his school life. At the third year his progress begins to diminish and he makes less progress each year from that point. The least amount of progress is made in the vocabulary division of reading. If he is an average reader we can expect him to remain at grade level for the first two years: but by the time he reaches the seventh grade he will be 2 years and 1 month retarded, and by the time he reaches the 12th grade he will be 3 years and 2 months retarded.

TABLE 1

Distribution of children by grade
included in this study

First grade	140
Second grade	127
Third grade	97
Fourth grade	119
Fifth grade	94
Sixth grade	90
Seventh grade	99
Eighth grade	56
Ninth grade	46
Tenth grade	36
Eleventh grade	41
Total	945

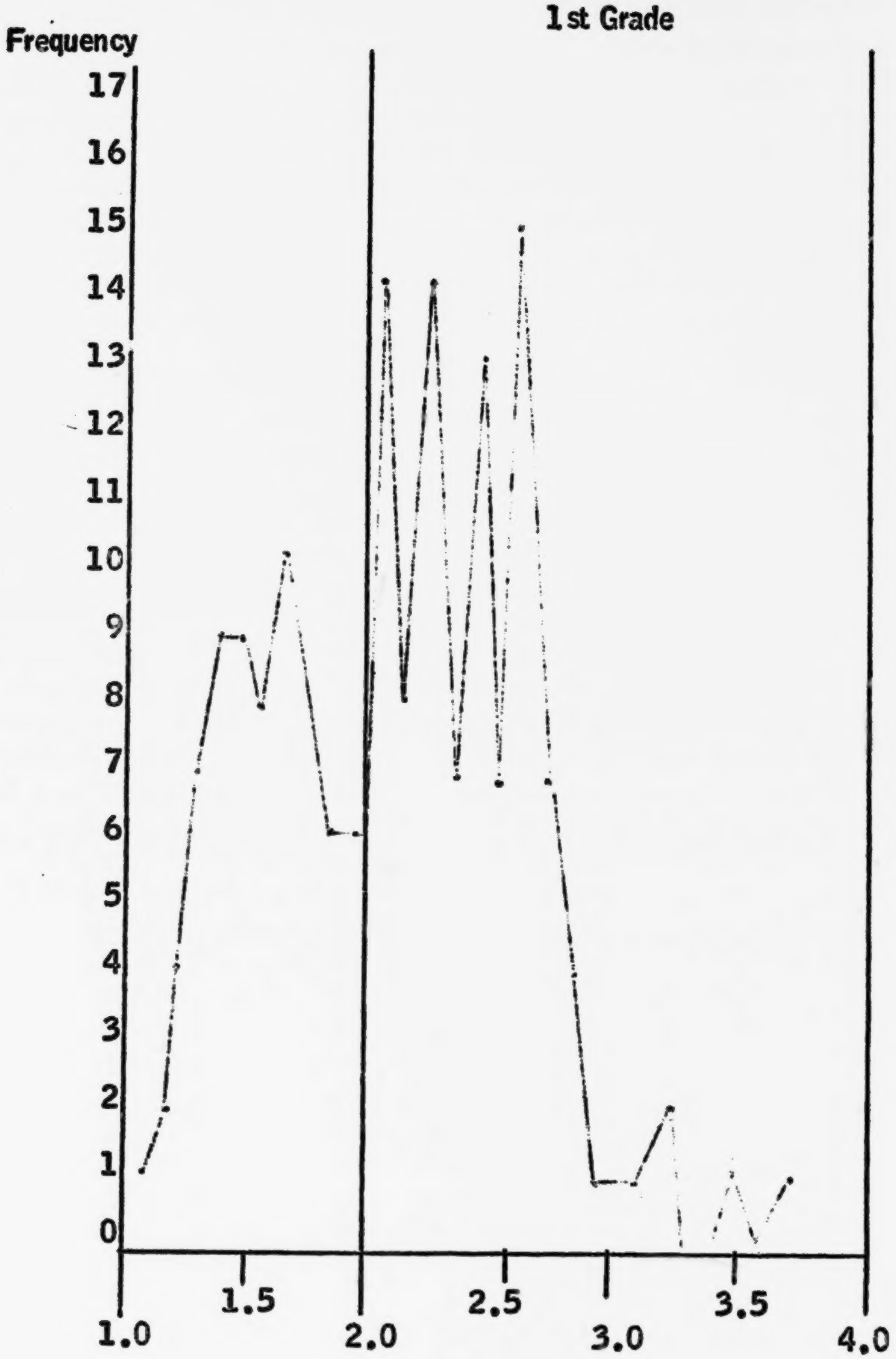

Figure 1
Reading Scores
Interpreted as Grade Placement

1st Graders tested
at end of year
140 students

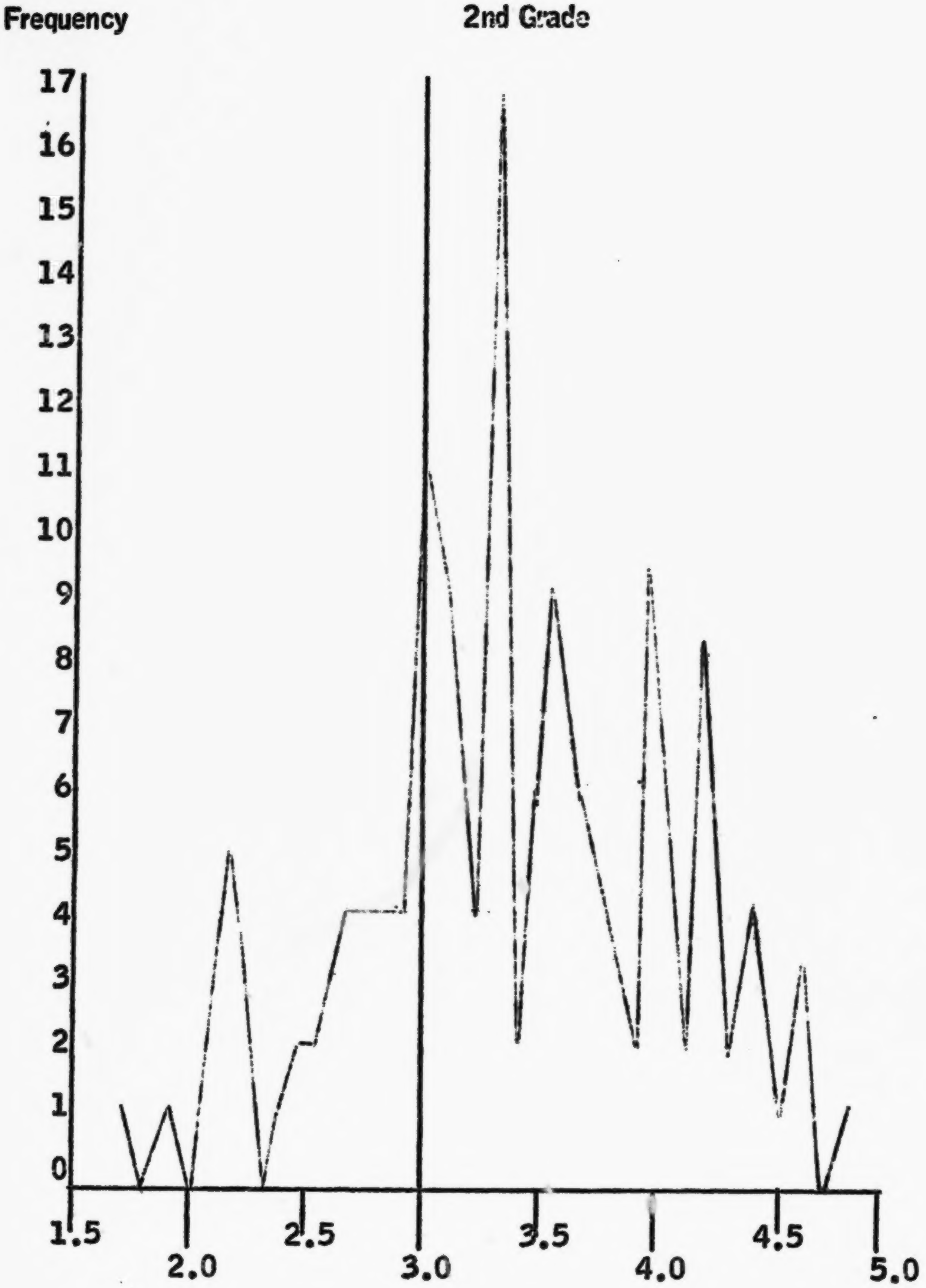

Figure 2

Reading Scores
Interpreted as Grade Placement

2nd Graders tested
at end of school year
127 students

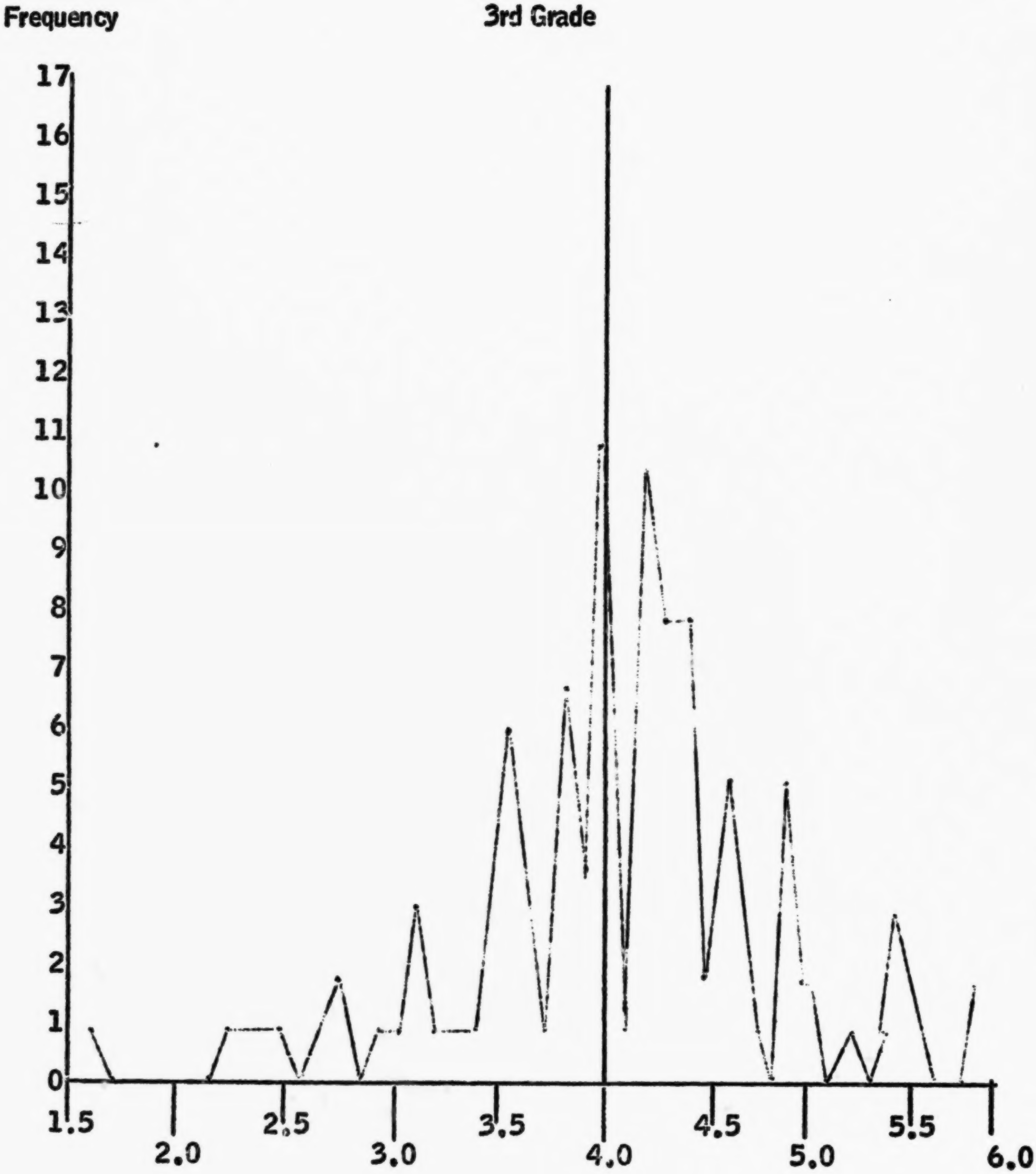

Figure 3

Reading Scores
Interpreted into Grade Placement

3rd graders tested
at end of school year
97 students

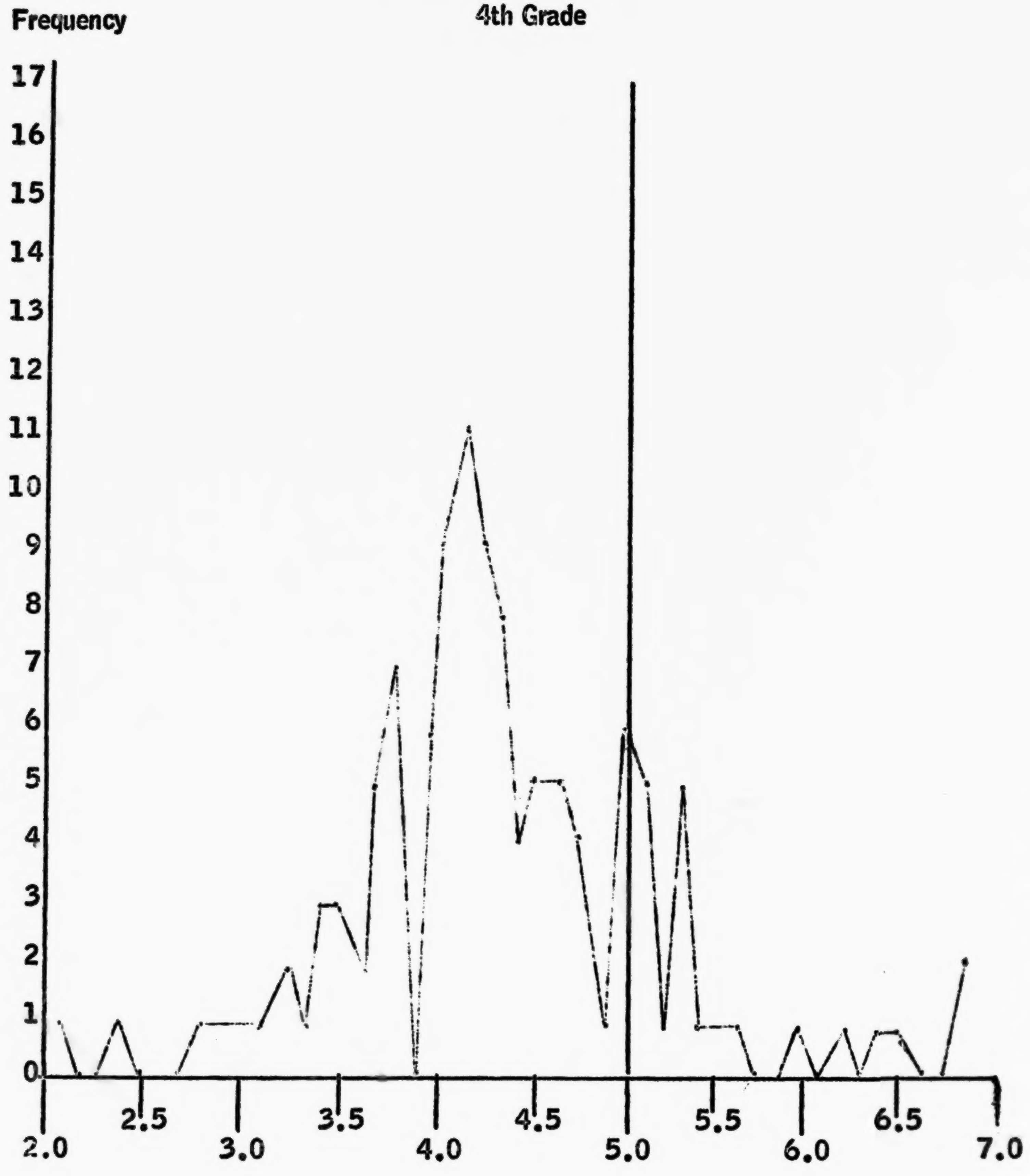

Figure 4

Reading Scores
Interpreted into Grade Placement

4th graders tested
at end of school year
119 students

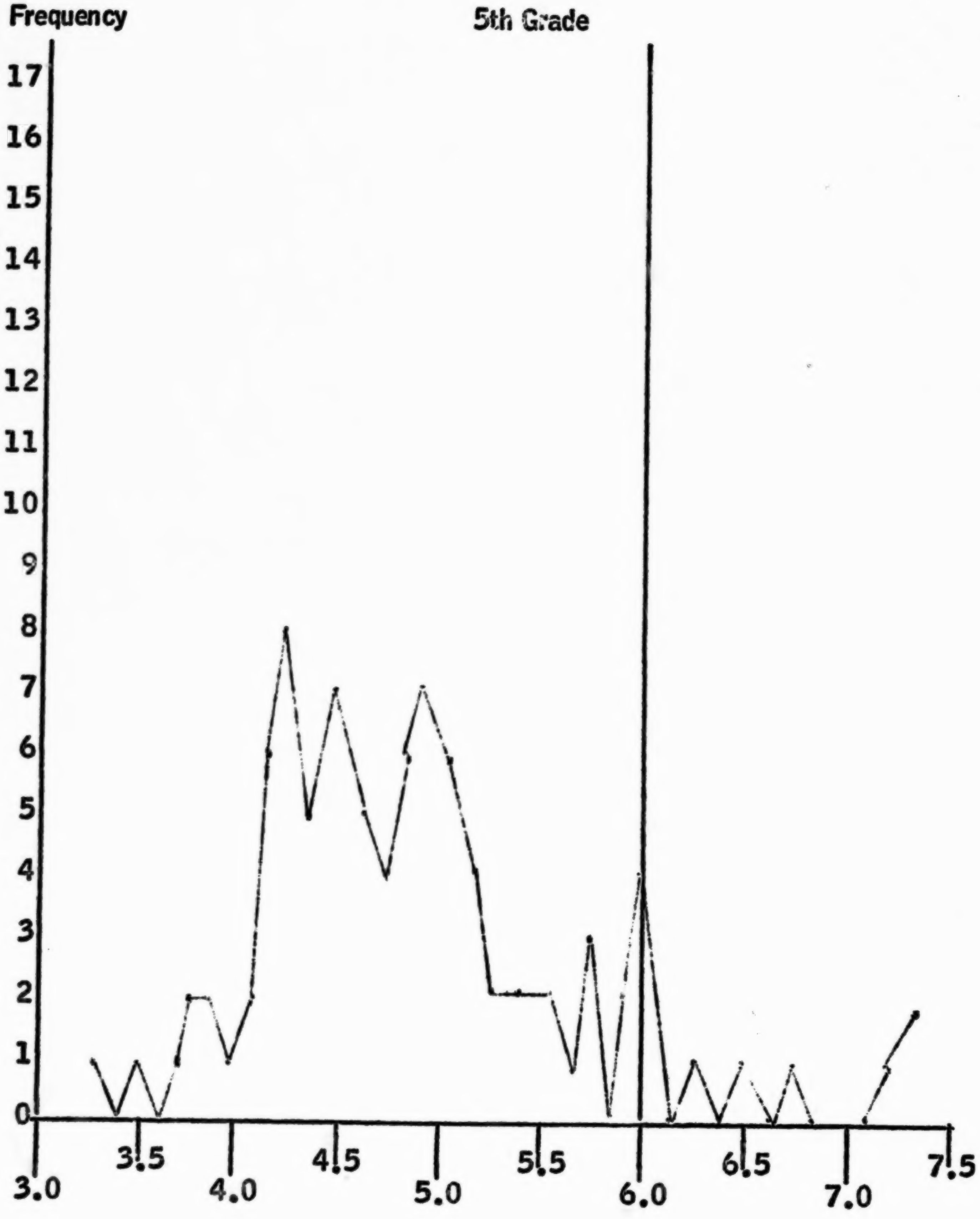

Figure 5

Reading Scores
Interpreted as grade placement

5th graders tested
at end of school year
94 students

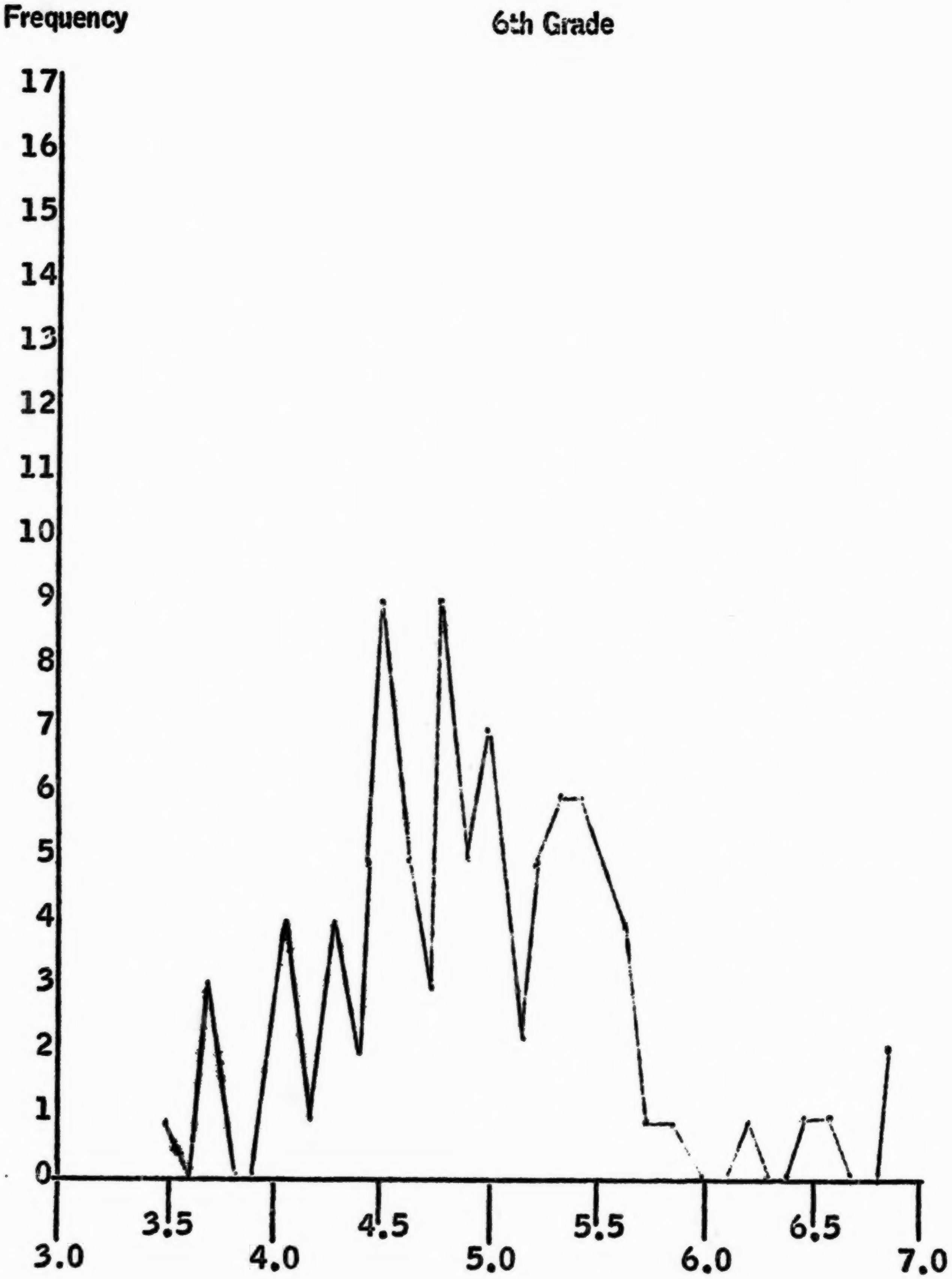

Figure 6

Reading Scores
Interpreted as Grade Placement

6th graders tested
at end of school year
90 students

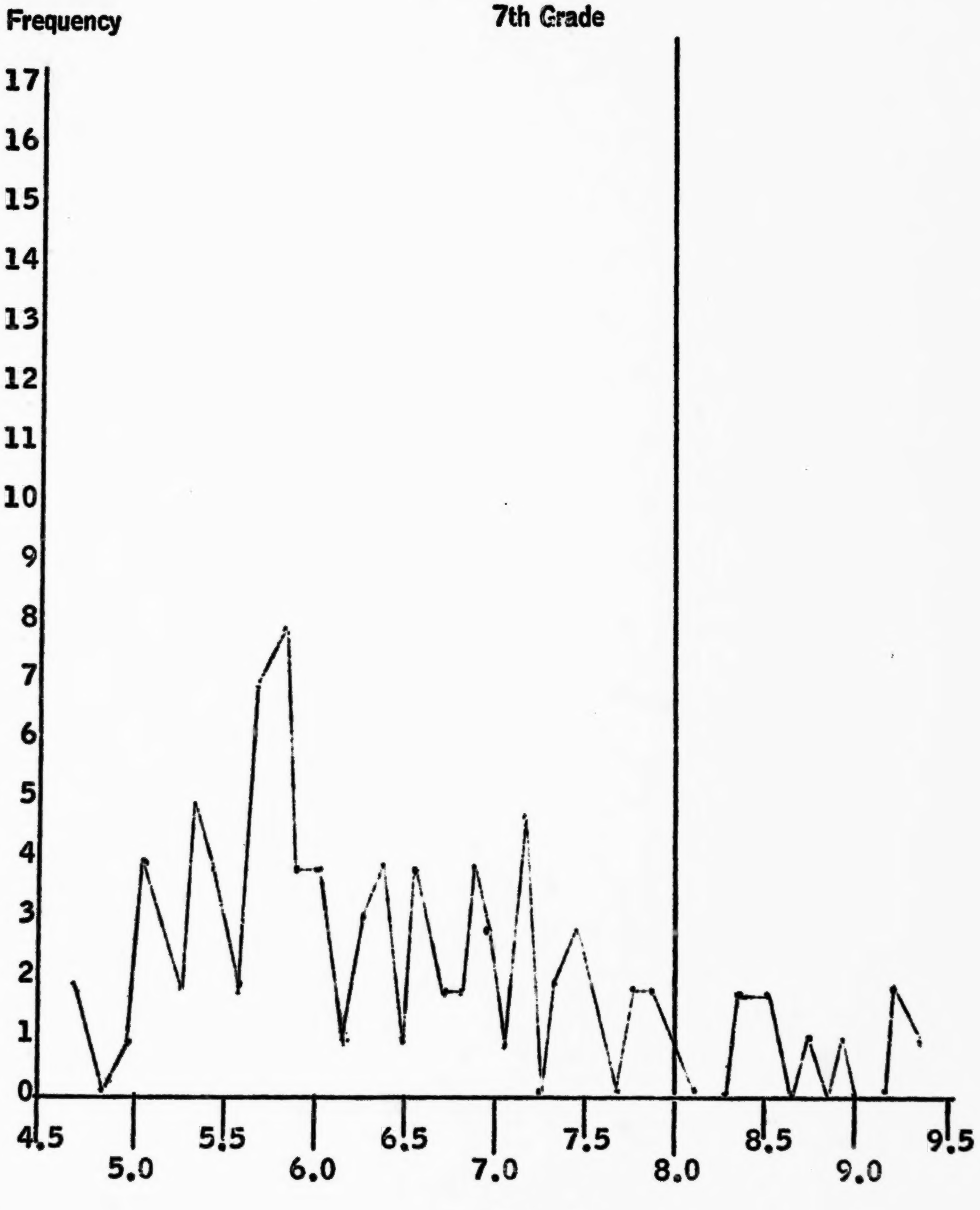

Figure 7
Reading Scores
Interpreted as Grade Placement

7th graders tested
at end of school year
99 students

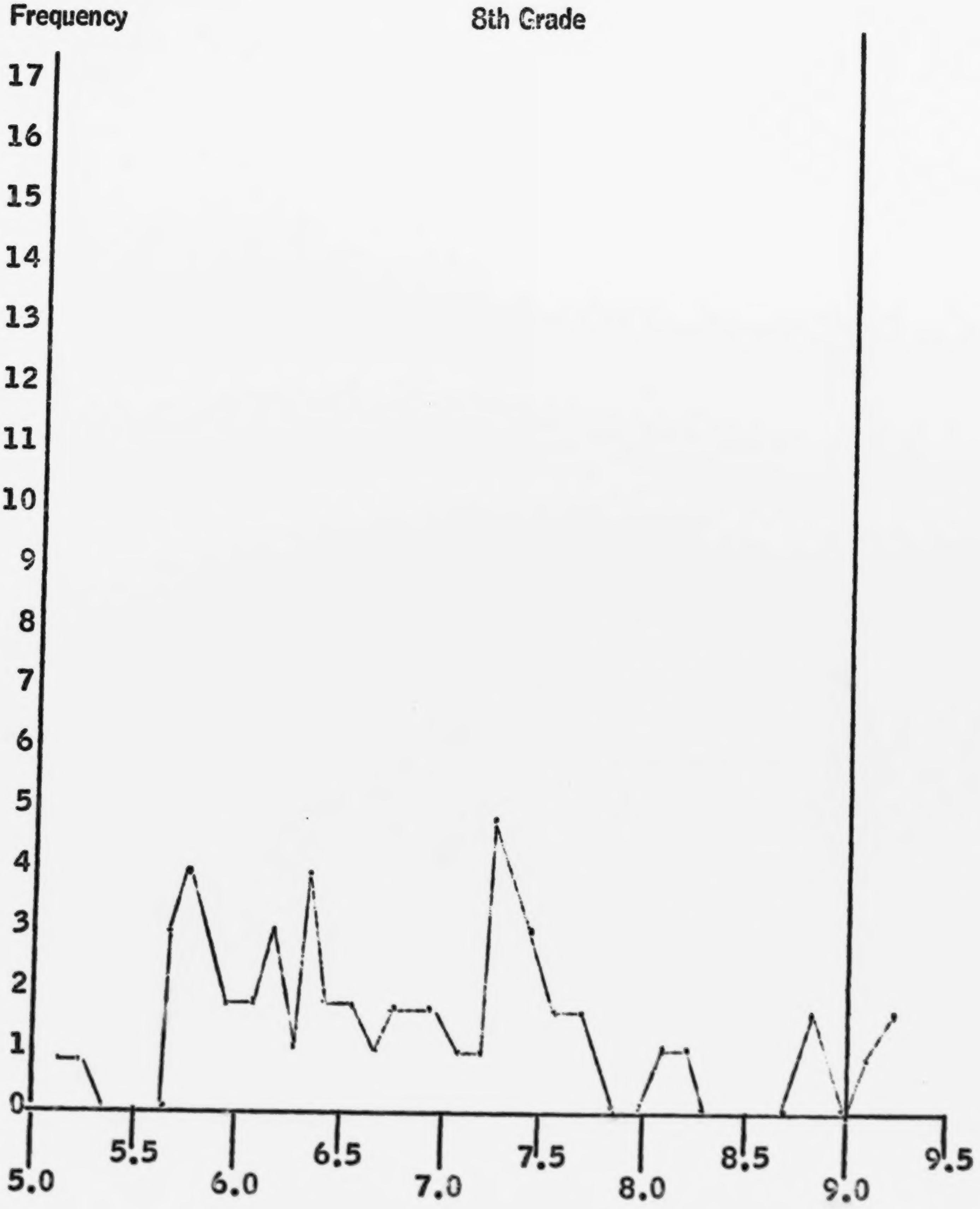

Figure 8
Reading Scores
Interpreted as Grade Placement

8th graders tested
at end of school year
56 students

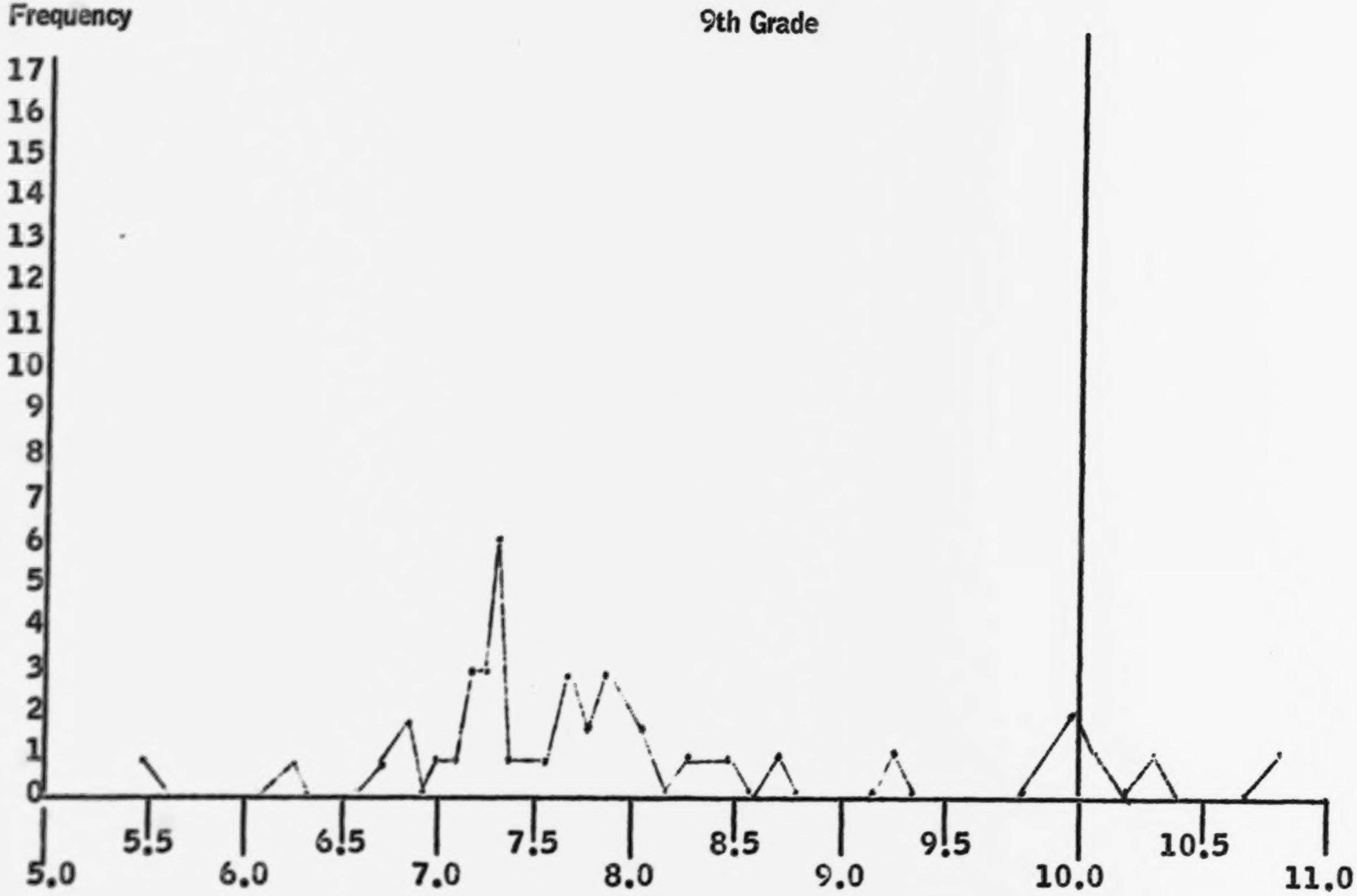

Figure 9
Reading Scores
Interpreted as Grade Placement

9th graders tested
at end of school year
45 students

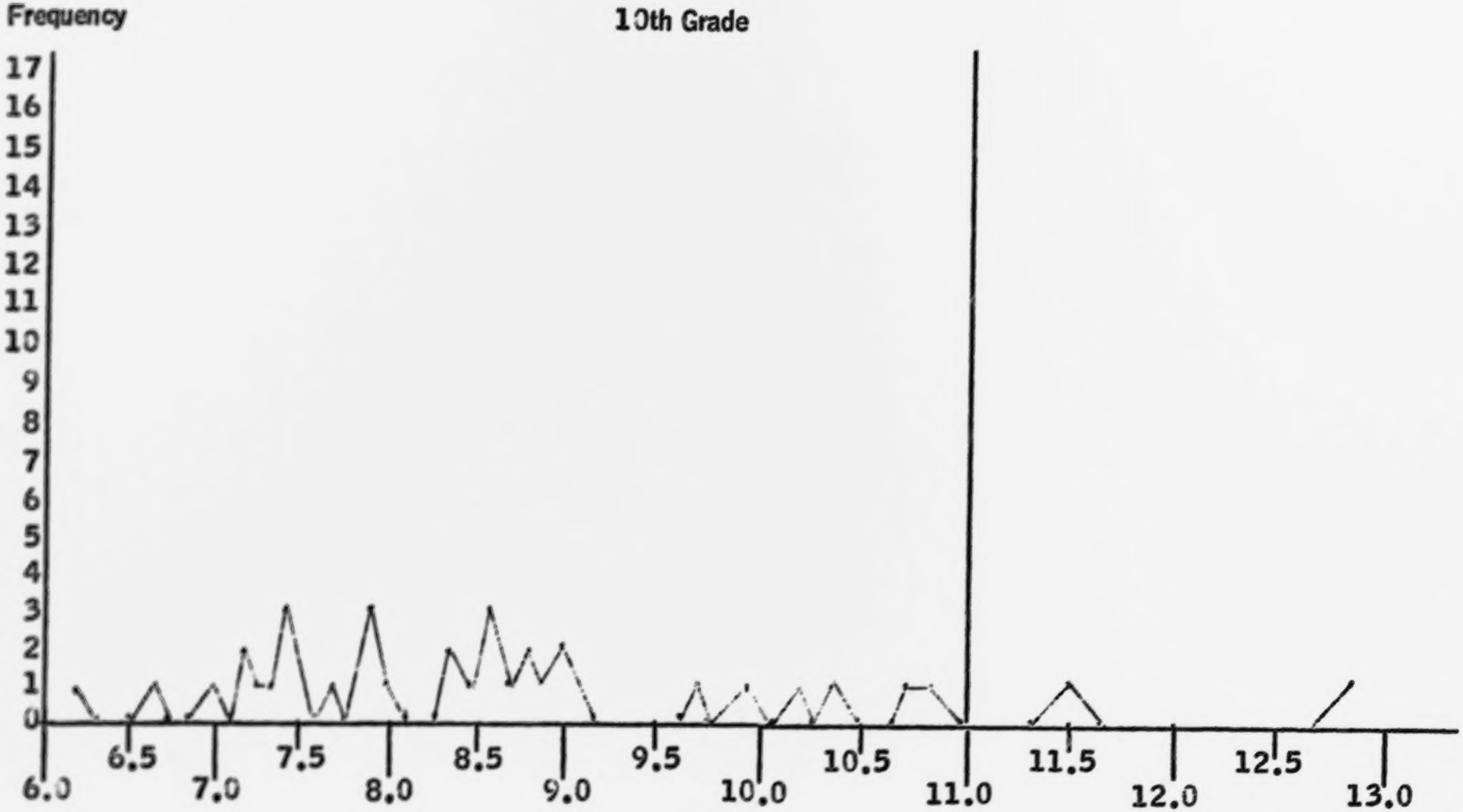

Figure 10
Reading Scores
Interpreted as Grade Placement

10th graders tested
at end of school year
36 students

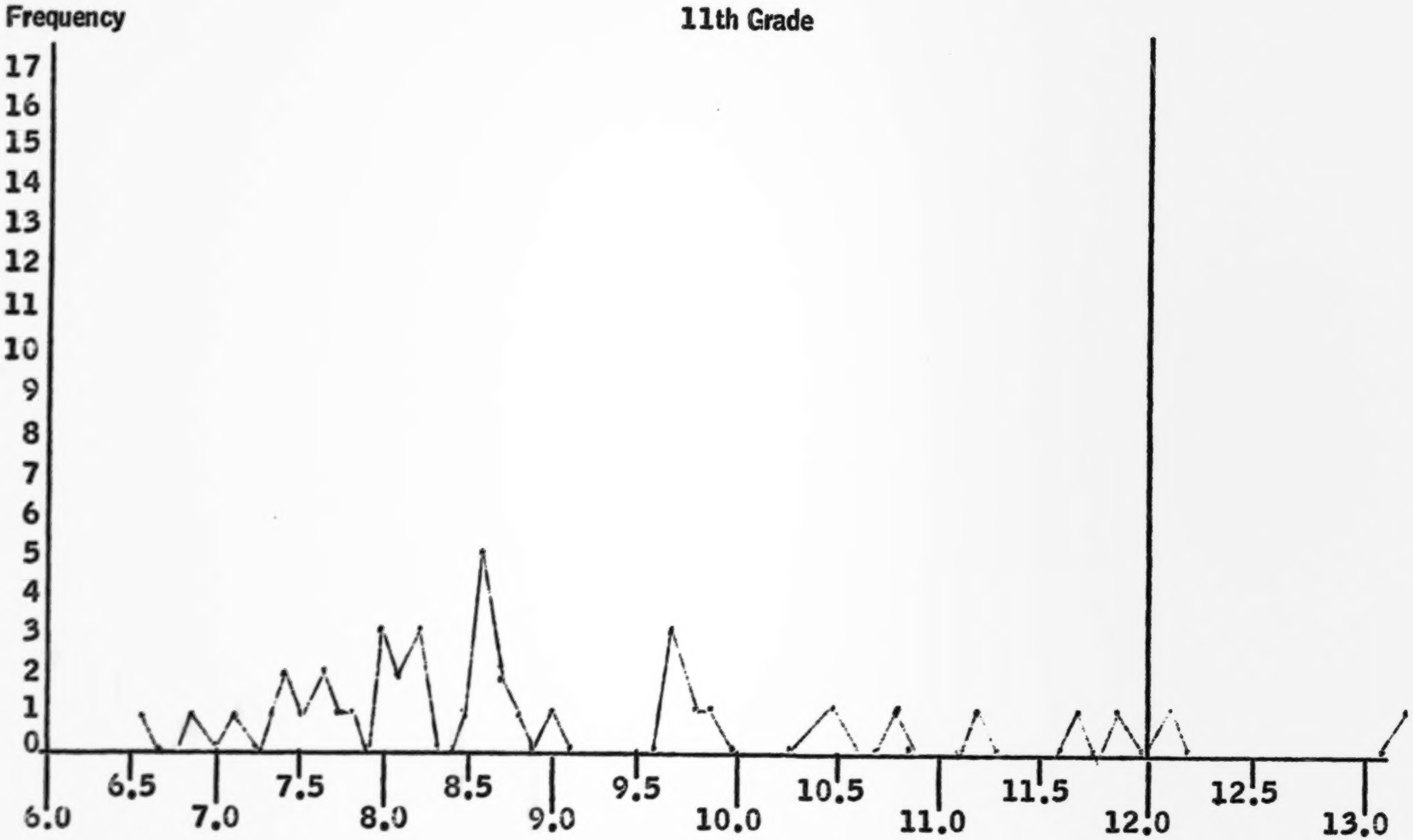

Figure 11
Reading Scores
Interpreted as Grade Placement

11th graders tested
at end of school year
41 students

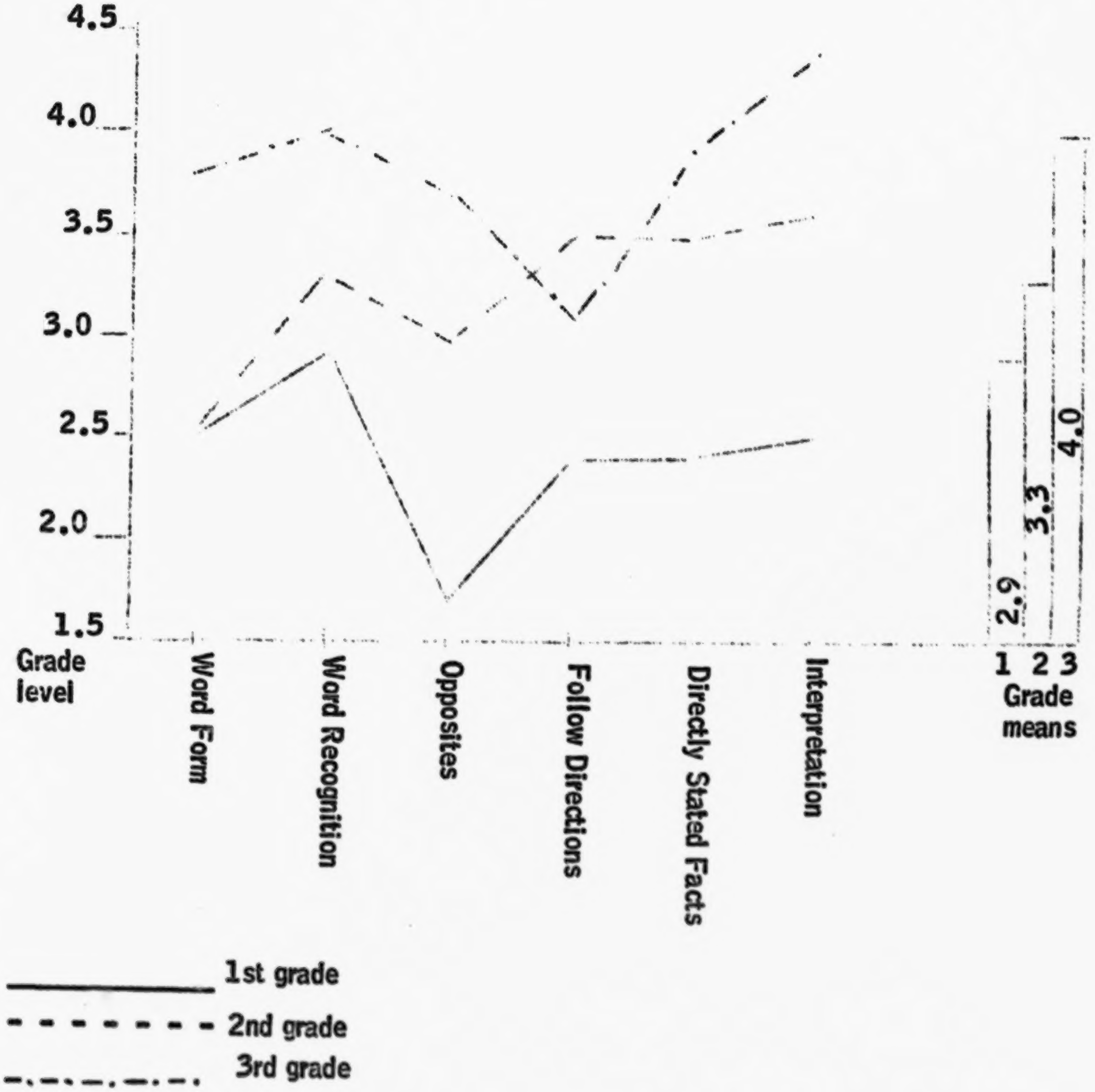
4.5
4.0
3.5
3.0
2.5
2.0
1.5
Grade level
Word Form
Word Recognition
Opposites
Follow Directions
Directly Stated Facts
Interpretation
2.9
3.3
4.0
1 2 3
Grade means
1st grade
2nd grade
3rd grade

Figure 12

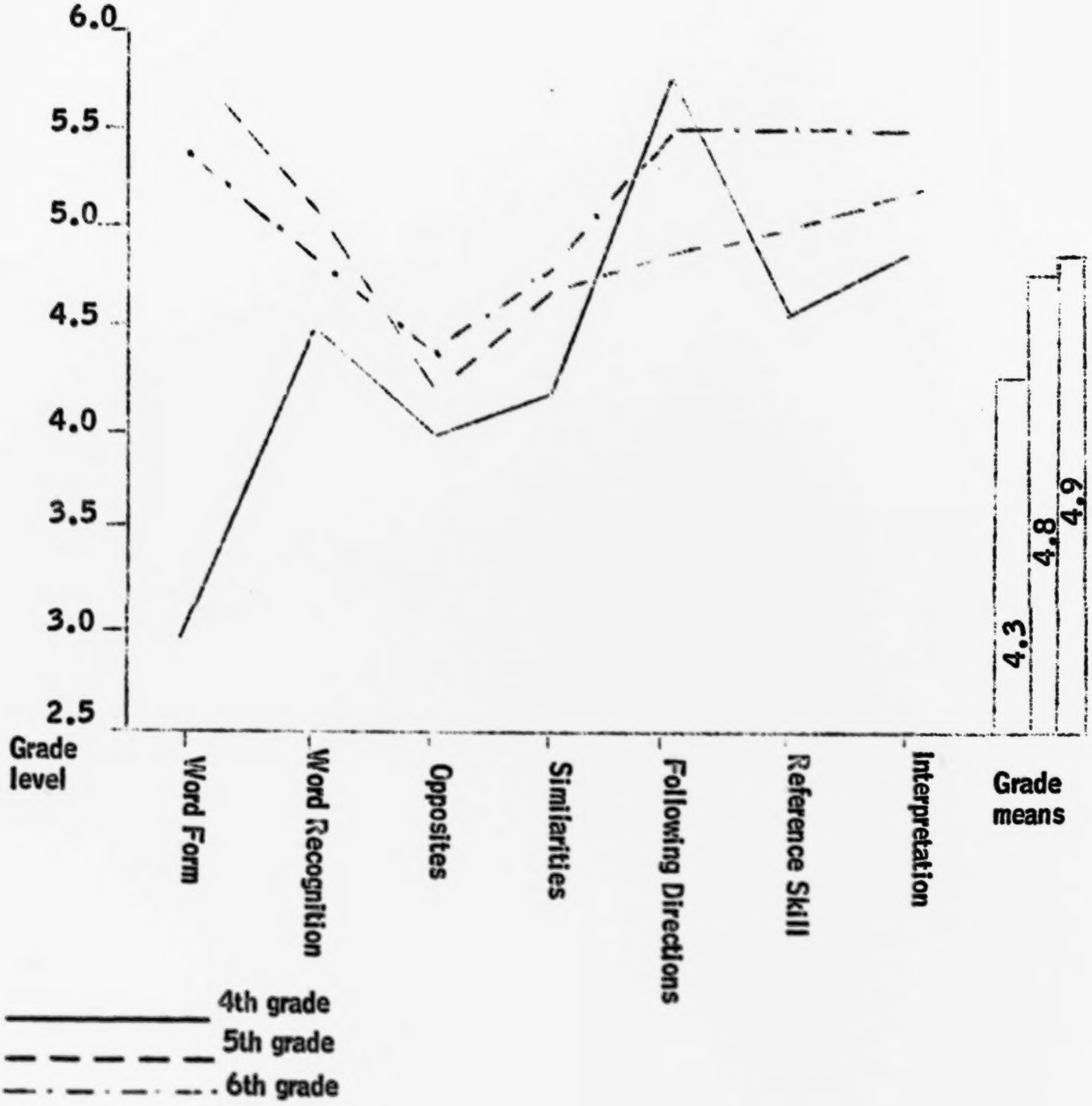
6.0
5.5
5.0
4.5
4.0
3.5
3.0
2.5
Grade level
Word Form
Word Recognition
Opposites
Similarities
Following Directions
Reference Skill
Interpretation
Grade means
4.3
4.8
4.9
4th grade
5th grade
6th grade

Figure 13

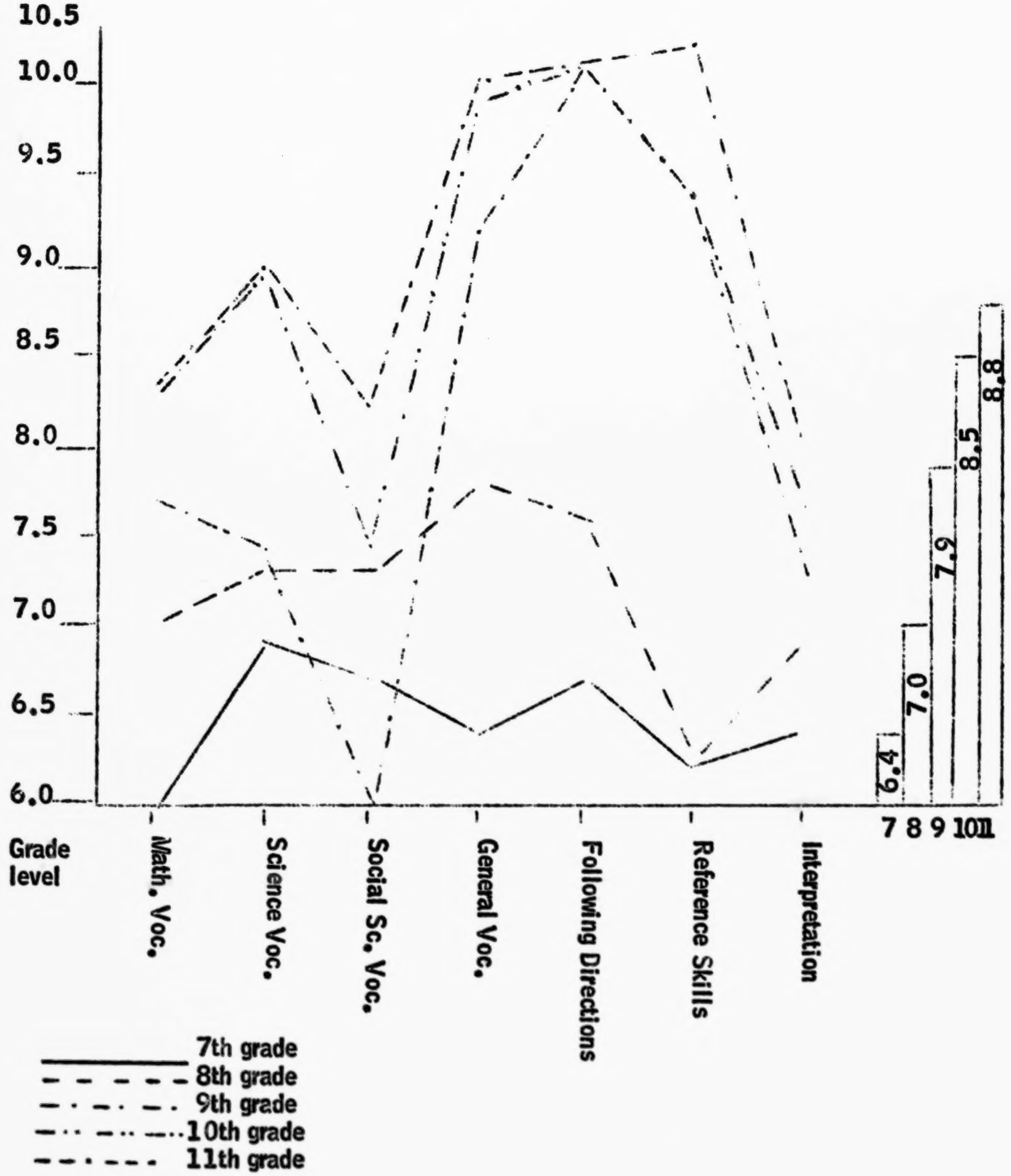
10.5
10.0
9.5
9.0
8.5
8.0
7.5
7.0
6.5
6.0
Grade level
Math. Voc.
Science Voc.
Social Sc. Voc.
General Voc.
Following Directions
Reference Skills
Interpretation
6.4
7.0
7.9
8.5
8.8
7 8 9 10 11
7th grade
8th grade
9th grade
10th grade
11th grade

Figure 14

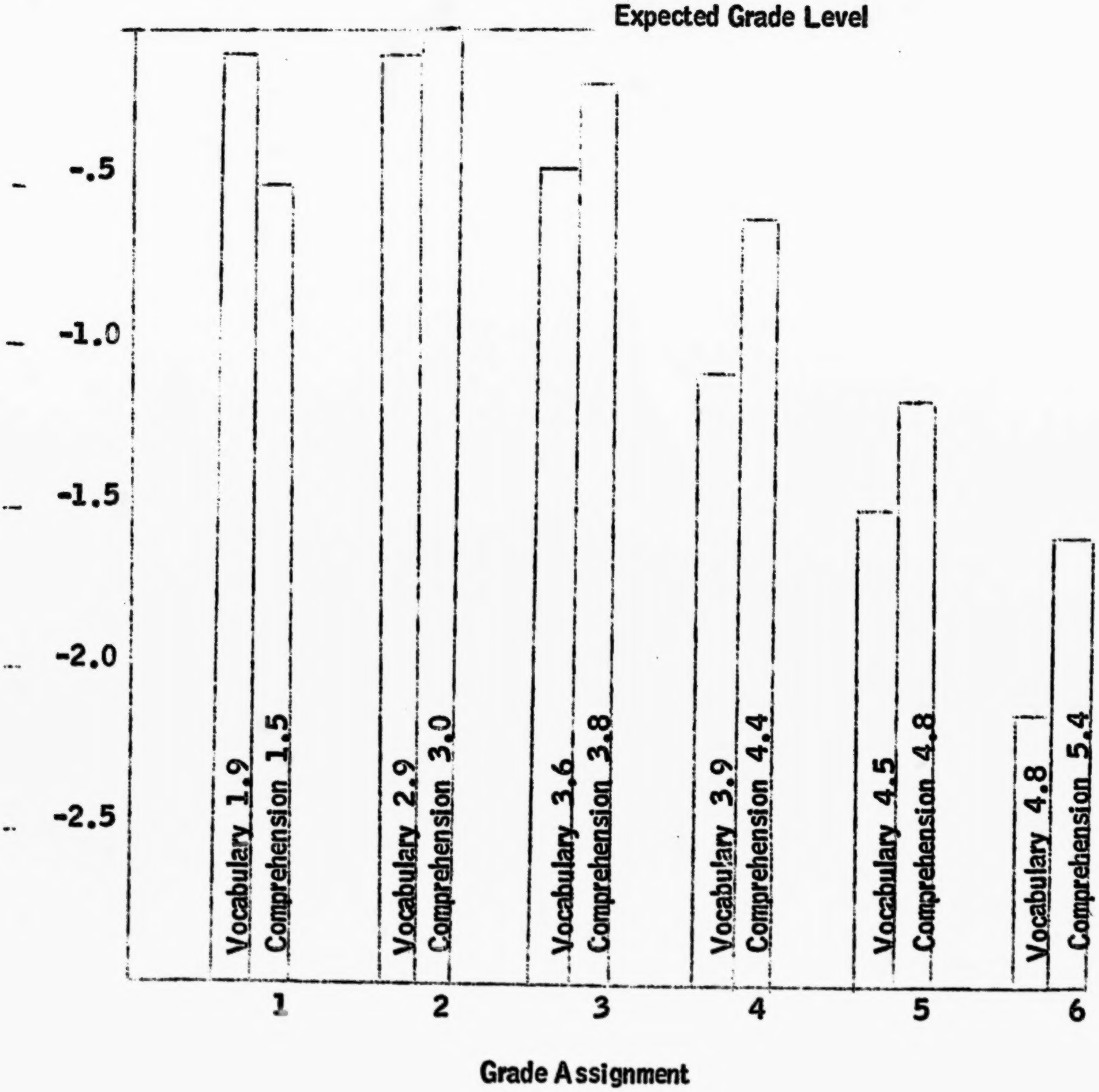

Figure 15

Reading level based on vocabulary and comprehension of 31 selected Navajo students who have been enrolled and tested in Window Rock Public School for 7 consecutive years.

TOYS ARE VALUABLE TEACHING TOOLS

Dorothy Vann

A group of teachers are currently conducting a Toy Research Study at the Ganado, Arizona Public Schools. They are experimenting on the use of toys in teaching non-English speaking Navajo Indian children English. Superintendent Walter S. Carpenter was instrumental in getting this toy research underway, which is cooperatively sponsored by the American Toy Institute, Inc., and Arizona State University. It is being directed by Dr. Grace Langdon, child Development Consultant, University Lecturer and former Consultant to the Institute and Dr. Irving W. Stout, Dean of the Graduate College at Arizona State University.

The toys for this study have been provided by individual toy manufacturers who are members of The Toy Manufacturers of U.S.A., Inc. Sixty-three different toy manufacturers have contributed toys. The American Toy Institute was organized in 1947 as the research division of the Toy Manufacturers of U.S.A., Inc.

This research project is in its third year and has another two years to go before a final evaluation is made. Even at this stage certain findings are beginning to appear that are described later.

In the upper grades the various toys are used to make more meaningful the studies in English, Science, Social Sciences, and Music. The studies in Mrs. Frazier's 4th Grade as recorded thus far, have proved that students who take part in the toy program have a better understanding of the subject under study, when toys are used to provide actual experiences for children who have language difficulties. These children are isolated not only by distance and cultural differences, but also by English terminology which is foreign to their understanding and life experiences. In a Geography class Navajo students were preparing to study about life on a mid-western farm. The teacher first gave the students a test on the meanings of words they would encounter in reading about the farm. On completion of the farm unit, the students were given a test on comprehension of the vocabulary used in the farm unit to determine the exact amount of knowledge gained during the study. Since none of the students had ever had an opportunity to see such a farm, they had to read carefully and do research to determine what was needed to make a miniature farm in the classroom. They obtained toys from the toy cupboard such as tractor, barn, silo, farm house, animals, and a toy combine. They constructed a toy electric fence from Tinker Toys and a windmill. They made plots of corn, wheat and hay. The girls had little opportunity to visit a modern home and needed to know the names of the rooms, their uses and what furniture was needed in a modern farmhouse. They made the furniture for the house. Not one child failed the final vocabulary test on a unit that made Geography come alive. In a Science lesson these 4th grade students took a set of wild rubber animals, and classified them according to their right categories such as mammals, reptiles, amphibians, etc. In every instance when toys were used to enlarge concepts and increase the English vocabulary the tests have proved the immense value of teaching with toys.

In the Beginner rooms composed of Navajo children who knew practically no English, toys have become the motivating power to rapid English learning. In Room 21 where Miss Sarah Yoder is teacher, the children are tested individually. A check list of concepts needed by the children is set up. Then the teacher makes special note of things that are foreign to the Navajo children's culture. She determines how to use the toys to make these things real to the children. For instance she took a doll house with miniature dolls and furniture to teach the children family relationships, and what life is like in their pre-reading picture books. Navajo children who live in a one room hogan have little understanding of life in a modern home. A card file on each child's progress is maintained.

In Room 17 where Mrs. Dorothy Vann teaches beginners, a carefully planned introduction of each toy is made. After a new toy is introduced the children are allowed to manipulate it and talk about it. Then an experience chart is composed by the class about the toy. There are songs written about most toys, or if not, the children help amke one to suit the toy. The Experience Chart stories are duplicated on the ditto machine and the child colors the picture according to direction, later on each child illustrates his own sheet for his toy book. These simple story sheets create an interest in reading. During the year, toys are used to illustrate songs and to bring out science facts. When time to start the pre-primer lessons a wind up toy "Spot", a Jane on Roller Skates puppet, Teddy Bear Tim make the pages come alive as the toys are used to illustrate a story or a song. Puppets make the shy children forget their audience as they dramatize the story of Red Riding Hood or the Three Bears. A record of the children's spontaneous speech is noted down unobtrusively on each student index card. A play set of Traffic Signs, policeman's badge and whistle provide an opportunity for safety play in the classroom and a skit for an assembly program. Toys are such delightful tools for teaching, the motivation is terrific and the results are very gratifying in child development.

THE USE OF SUPPLEMENTAL MATERIALS IN THE LANGUAGE ARTS

Margaret McNevins

The White House Conference on Children and Youth gives implications on materials in the elementary curriculum. In essence, it starts that all children who can be helped through education are the proper responsibility of the school and plans should rightly include them.

Materials essential to motivation, instruction and enrichment in an educational program were recommended for every elementary school. Quality library facilities, extensive use of audiovisual materials and facilities, and up-to-date textbooks and other materials were specified, along with more extensive use of television, newspapers, pamphlets, public talks, slides, photographs, films, film strips and tape recordings.

Research in Indian Education and local surveys have produced the program for Whiteriver Public School which relies heavily on supplemental materials to meet our local needs.

Whiteriver Public School has an enrollment of approximately 720 pupils in grades beginners through the eighth with an 83% Apache-speaking population. The 24 elementary teachers average an attendance load of thirty pupils. Grades beginners through sixth are self-contained, in the 7th and 8th the academic subjects are with homeroom teachers, special teachers include shop, home ec., music, and physical education.

A full time nurse for the elementary school provides a pre-clinic for registration and health screening of the beginning pupils. Pre-grouping takes place during the same period according to family background and degree of acculturation.

The physical examination includes visual screening, auditory screening, speech and physical handicaps which are reported to the homeroom teachers in individual conferences and record keeping.

Double session schedules affect our grouping in grades, beginners through the third grade. The outlying communities are bus transported for the morning session, the local Whiteriver population provides the afternoon group. Our enrollment provides two beginning rooms in the morning and two in the afternoon. Grouping for classrooms of three sections in each grade is affected by bus transportation, test evaluations, pupil progress, and teacher opinion. The advanced section usually has about half Apache and non-Indian membership.

The testing program in the primary grades uses the Otis Quick Scoring Mental Test and Metropolitan Readiness to provide a standard for teacher interpretation of peak performance in instruction. In the intermediate grades the Lorge-Thorndike Verbal and Non-Verbal evaluated a high percentage of students with normal or above normal rating on the non-verbal intelligence, a lower percentage of students with normal or above normal on the verbal intelligence. The data considered the adequacy of the test, the bilingual student, the native environment, attitudes, poor teaching techniques, inadequate teaching and reading materials, introduction to reading too early or too late, health and cultural factors.

The achievement tests using California Achievement and Iowa Tests of Basic Skills gave further indications to improve teaching techniques and continue to teach pupils to "learn to read" as well as "read to learn". The evaluative material verified that our school should be selective in materials and the use of materials since every homeroom teacher taught reading and reading proficiency, which is so vital in all subject areas.

The language arts problem must be attacked from the primary grades upward and requires the cooperation of parents, school and community. It requires continuity and integration which is interpreted in our curriculum as a Developmental Reading Program.

Whiteriver Public School has the native speaking Apache child in the majority for class enrollment. The Apaches do not know a written language. The purpose for research into Phonetic Keys to Reading for Whiteriver was to build an aural-oral background and develop independent reading skills. The linguistic approach is a natural for the Phonetic Keys to Reading published by Economy Company, to precede our basic Scott-Foresman reader. Local research verified that:

1. Pacing the auditory perception of the sounds of the letters from the words in the spoken vocabulary precedes the developing of a sight vocabulary meets the needs of the linguistic approach.

2. It is best to begin with whole words and to avoid the use of word families so that there is no chance for distortion in the pronunciation of words. The child learns the sounds of the letters and then is taught to blend the sounds smoothly and quickly pronouncing the sound of the whole word. In this way the child from the beginning becomes accustomed to thinking of words as differentiated wholes.

3. Whole words bring ideas, now we can read becuase we know the sounds of the letters. Words in combination with other words transfer the ideas from the printed symbol to the mind of the reader for a mental identification.

4. The Phonetic Keys approach to the whole word has the child to identify the word right after sounding it so that meaning can be established immediately and the child will know what the whole word means as well as how it sounds. The thought process of acculturation transfer to ideas is quick and comprehension increased.

5. California Achievement test scores in comprehension have a 30% increase. This method of sounding procedures has not interfered with comprehension. One of the objectionable features of the phonetic methods formerly used was that they encouraged distortion of sounds and sounding procedures interfered with comprehension.

6. Individual reading has increased in the number of supplementary readers used and library books read.

Rapport is established with our Apache speaking beginner and teacher by comforting the child to his classroom through communication. Listening is paramount in achieving this communication. It is recognized that children differ in the ease with which they learn new vocabulary. Needed repetition occurs naturally with classroom living and listening skills become developmental with teaching techniques. Our state adopted teaching materials, at the initial stages, are necessarily secondary to our "script-text" or locally-prepared supplemental materials.

Supplemental materials in language arts in the primary grades then become experience charts and records in briefer form. These materials will often reinforce or anticipate the forthcoming basic vocabulary of the state textbooks. The Phonetic Keys and Scott-Foresman picture card sets, illustrated charts, My Kindergraph, and readiness readers all form the vicarious materials to actual experiences which require active listening to produce response in communication.

The tools and materials needed for preparing "script-texts" should be readily accessible, blunt chalk or heavy crayon, colored newsprint, oaktag paper cut to appropriate sizes for labels, legends under pictures or records, flo-master or lettering pens, music staff liner and butcher paper for temporary teacher-pupil planning prior to diary record, etc.

When the linguistics of sound have prompted sufficient oral response from the beginner pupil, the supplemental program of Phonetic Keys to Reading by Economy Company precedes our basic pre-primers to strengthen our reading program. Tag is a must to precede the first basic primer and sight word approach. Do not neglect attractive picture books and materials to broaden interests in reading and at the same time increase competence in:

a. Interpretation of ideas (Reading into the picture, picture sequence, etc.)
b. Facility to perceive details.
c. Fluency with word meanings.
d. Facility in the expression of ideas.

WHITERIVER PUBLIC SCHOOL

DEVELOPMENTAL READING CURRICULUM

Pre-first grade - Sound Skills Development (Supplemental)

Tag -Phonetic Keys to Reading, Economy Company. Precedes basic pre-primers.
Auditory skills precede sight or "see and tell" method.

Dot and Jim -Phonetic Keys to Reading
May precede pre-primer or be taught simultaneously with first pre-primer. Pre-primers are usually read faster after having completed Dot and Jim.

Picture Cards, Phonetic Cards and Charts

Additional Reading Readiness Material (Basic-State Adopted)
Scott, Foresman Co.
We Read Pictures
We Read More Pictures
Before We Read
Guess Who - A Junior Primer

Our Big Book - 16 picture cards
Card and Chart Sets

Basal Readers - Scott, Foresman - State adopted texts.
The Three Pre-Primers
The New We Look & See
The New We Work & Play
The New We Come & Go

Many Surprises - Lyons & Carnahan Basic Reader (Supplemental)
Supplement basic reader for those retained and who have completed Scott, Foresman series.

Enrichment Readers (Basic)
Take Off & Ride Away - American Book Co.
Time To Play & All In A Day, American Book Co.
Rain and Shine, D. C. Heath Co.

Independent Individualized Reading (Supplemental Material)
Scott, Foresman Basic Reader-Bibliography- Teacher's Edition
Independent Reading Lists for each unit -3 to 5 copies of each recommended book in the elementary library.

Library Program (Supplemental)
Librarian supplied with pupils reading scores-correlate with individualized reading charts, cumulative record.

Surprise -My Weekly Reader Series - Current Events (Supplemental)

Script-Text Materials (Supplemental)

Tests - Scott, Foresman Basic Readers Tests for 3 Pre-Primers

Listening Skills-
    Listening, Cooperative Sequential Tests of Educational Pogress
    Educational Testing Service
    Tape Recorder - 12 portable ear phones
Filmstrips - Scott, Foresman Phonics Series (Supplemental)

II. DEVELOPMENTAL READING CURRICULUM
REGULAR FIRST GRADE PROGRAM

A. Grouping - English speaking (prerequisite), chronological age, mental age, teacher opinion, test scores, transportation schedule.

B. Sound skills development
   Tag - Economy Co. must precede basic pre-primer.

   Dot and Jim, teach to new pupils in system, review if taught to pupils in pre-first. Sounding skills precede basic reader.

   All Around with Dot and Jim. May be taught preceding basic first grade reader or taught simultaneously with basic reader as a separate phonics lesson.

C. Basal Readers - Scott, Foresman Co., state adopted text
   New Fun with Dick and Jane - 1/1
   Think-&-Do Book - Teacher directed study-extended reading. (A must.)
   Purchased for each pupil
   The New Our New Friends - 1/2
   Think-&-Do

   Happy Times - Lyones & Carnahan - Supplemental basic reader for those who have completed Scott, Foresman.
   Fun to Do Book for Happy Times - workbooks for practice materials related to skills. Reference work only, do not write in this set.

D. Enrichment Readers
   Our Happy Ways
   I Know A Secret
   We Three
   Around Green Hills

E. Independent Individualized Reading
   1. Providing for individual differences in skills learning

2. Providing for pupil initiative
3. Instruction which improves personal and social qualities of pupils.
   Scott, Foresman and Co. Teacher's Edition Basic Text -
   Bibliography - Selections from other readers 1 to 3 copies.
   Teacher's Ed. Appendix, extended interests, literature, etc.

F. Library Program-teacher directed and follow-up, individual conferences with members in one group while other group is in library.

G. Listening Skills

H. Tests
   Scott, Foresman basic reading tests when text is completed
   SRA Achievement

I. Records - health and cumulative folders

J. My Weekly Reader No. 1, Current Events

III. Developmental Reading Program
   Grade Two - Overall program listed under Grade 1

A. Grouping - English speaking (prerequisite) for one section of 3 groups, chronological age, mental age, teacher opinion, test scores, transportation schedule.

B. Sound Skills Development -preceded basic reader
   Check cumulative folder reading record to see if all first grade Phonetic Keys to Reading have been completed. Teach or review as needed.

   Through Happy Hours, Economy Co. -may be taught to precede basic second reader or simultaneously with basic text.

   As Days Go By.

C. Basal Readers - Scott Foresman Co., state adopted text

   New Friends & Neighbors (Basic 2/1)
   Think & Do Book
   New More Friends & Neighbors 2/2
   Think & Do Book

   Down Our Way - Lyons & Carnahan Co.
   Fun To Do Book (Reference only)
   Bond Plan Manual teacher's guide for both regular and classmate

D. Enrichment Readers
   Over a City Bridge
   Meet Our Friends
   Along The Way
   What Next
   Farm and City

E. Remainder of program listed under grade 1

Grade Three

Curriculum listed under grade 1.

A. Grouping -group the children in each grade according to their reading score and teacher judgment which includes health record. If a child is reading on second grade level and in the fourth grade he would still be in the fourth grade but ample supplemental second grade material will be used for motivation. If Scott, Foresman has been covered, then Lyons & Carnahan or other supplemental material is available.

B. Basal Readers -Scott, Foresman
   New Streets and Roads (Basic 3/1) Think & Do
   New More Streets and Roads 3/2 Think and Do
   Stories From Everywhere -Lyons & Carnahan -Fun To Do Book

C. Enrichment Readers
   All Around America
   Faraway Ports
   Looking Ahead

D. Sound Skills Development
   Along New Ways - Economy Co.
   Wide Doors Open

E. Independent Individualized Reading - Emphasis on independent reading SRA Laboratory No. 11A, student booklet record filed in cumulative folder.

Grade Four

IV. Developmental Reading Program
   Curriculum listed under grade 1

A. Basal Readers - Scott, Foresman Co.
   The New Times and Places 4/1 - Think & Do Book
   More Times and Places 4/2 - Think & Do Book
   Meeting New Friends -Regular & Classmate Editions, Lyons & Carnahan
   Bond Plan Manual for teachers.

B. Enrichment Readers
Sunshine Book
On The Trails of Adventure
Luck and Pluck

C. Sound Skills Development
Down Bright Roads, Economy Co. Phonetic Keys
Tales To Enjoy, Economy Co. Phonetic Keys

D. Independent Reading Skills
SRA Reading Laboratory 11A two sections
SRA Reading Laboratory Elementary Edition one section of fourh

E. Library Program

F. SRA Achievement
Iowa Tests of Basic Skills

G. Reference Skills - "Look-It-Up" Club, My Weekly Reader Skils

Grade Five

A. Basal Readers
The New Days and Deeds, Scott, Foresman Co. 5/1 Think & Do
More Days and Deeds 5/2 Think & Do
Days of Adventure, Regular and Classmate, Lyons & Carnahan
Bond Plan Manual for Days of Adventure, Teacher's Edition

B. Enrichment Readers
The Blue Sky Book
The World Around Us
Merry Hearts and Bold

C. Sound Skills Development
Remedial cases - Teacher's Guide basic reader Scott, Foresman

D. Independent Reading Skills
SRA Reading Laboratory

E. F. & G. Same as above for fourth grade

Grade Six

A. Basal Readers
The New People and Progress 6/1 Think & Do, Scott, Foresmn & Co.
More People and Progress 6/2 Think & Do, Scott, Foresman & Co.
Stories to Remember Regular and Classmate Editions, Lyons & Carnahan
Bond Plan for Teachers - Do not write in this series workbook, reference

B. Enrichment Readers
   New Runaway Home
   From Every Land
   Firelight Book
   Just Imagine
   Living In The Age of Machines

C. Independent Reading
   SRA Laboratory - Reading for Understanding - Student Record Books
   Reader's Digest - Skill Builders

A PROGRAM OF ISOLATING AND COUNSELING STUDENTS WITH PERSONAL PROBLEMS

Arlie Anderson

We are not attempting to do a piece of research in testing 9th grade girls because we lack both time and a trained staff. We present our findings for whatever they may be worth to this group, particularly to those interested in Indian education. Our tests were given to both sexes of 9th grade, but since the Girls' Guidance Department works primarily with girls this study will deal with them. We started out with a modest study-one based on sociograms to determine isolates, near isolates and leaders. In exploring leads on individuals we soon realized sociograms were an aid but not accurate enough for our purposes. The whole problem centered around the big problem of personal and social adjustment to dormitory living and to everyday classroom work.

We gave a sociometric test to all ninth grade girls in the fall of 1959. Sixty-five girls were tested and according to the test about one-third were isolates or near isolates. Our next step led to their dormitory supervisors and to classroom teachers. After considering these reports, we concluded none were true isolates, yet many were very lonely girls; however, all falling in the above groupings appeared to have serious social problems. Other interesting trends developed as the study unfolded and as time passed. For example,

1. At the end of the first year, 25 percent of the isolates and near-isolates were drop-outs.
2. There were 18 potential leaders. Of this group, only one dropped out.
3. Navajo girls appeared more apt to form cliques than other tribes.
4. Class leadership and dormitory leadership were not synonymous. Work factors, group assignments and personal relations entered the picture. For example, a very retarded girl, scholastically, and a near isolate in class might be a leader in the dormitory.
5. Good conduct and class leadership did not necessarily follow.

Because of the above findings, we determined sociograms should be given every two years. We followed through on this in January of this year. Even on our second test after two years findings still strongly indicated an apparent relationship between isolates, near isolates and drop-outs. On this second test, 68 were tested. Our records show 50 percent of the maladjusted on the sociometric test became drop-outs.

Next consideration brought the realization that girls were widening their social horizons through contacts at school and off campus, in work situations and through religious organizations. We have to consider chronological age, class sectionalization (A, B, or C Tracks), home background, inter-tribal rivalries, particularly in Indian villages, health factors and socio-economic and personality difficulties.

Our sociometric testing program pointed up the need for studying the individual girl even though the test as a measure was coarse and often inaccurate still it had considerable merit as a tool in counseling. In trying to validate and/or invalidate the findings contacts were made with dormitory staff, teachers and administrators. These were storehouses of information and of great help in attempting to help the individual with a problem or problems. Once the data from other sources was compiled we knew other tests were needed besides the usual tests given in the school: the California Achievement test, Otis and Iowa Silent Reading test. Because we were already using the California Achievement test we decided to use the California Test of Personality, Secondary, Grade 9 to College, 1953, Revision, Scoreze No. 280, Form AA to these same girls.

This latter test was a teacher learning instrument. It provided data for aiding development of a normal balance between personal and social adjustment and pointed up, in a more scientific way, undesirable individual adjustments. Part II A has a unique feature, tha of treating adjustment difficulties. Part I A. Personal Adjustment attempts to measure in percentages self-reliance, sense of personal worth, sense of personal freedom, feeling of belonging, withdrawing tendencies and nervous symptoms while part II A. Social Adjustment did the same for social standards, social skills, anti-social tendencies, family relations, school relations and community relations. In all, twelve problem areas were tested.

Over-all rating of all 62 ninth grade girls tested indicated those falling in 1 %-ile to 5 %-ile appeared to need special help while those falling roughly between 10 %-ile and 50%-ile seemed to make satisfactory adjustment. The in-between fell on either side but in varying degrees.

On personal adjustment girls ranked between 1 %-ile and 70 %-ile. On Social Adjustment the range was from 5 %-ile to 95 %-ile with the majority falling in the 10 %-ile to 50 %-ile. The total adjustment range was 5 %-ile to 80 %-ile with the majority falling between the 10 and 40 %-iles.

Over 50 % of the girls tested showed marked withdrawing tendencies, their %-ile rank ranging from 1 to 10 %-ile with 14 out of 62 falling in the 1 %-ile group. In the area of personal worth, about one-third fell in the above grouping. This accounts for the lower %-ile rating on Pt. I. There was only one area (anti-social tendencies) in which two-fifths of the group fell in the above range; however, there are two factors which could well affect the validity of this test: truthfulness of response and varying language abilities of the students.

A study by tribes indicated Apaches rated low on social standards and personal freedom. Utes scored low but were average for the group. Hualapais and Havasupais rated low on anti-social and withdrawing tendencies. Papagos appeared to be a stable group, test-wise. Hopis were about average for the group. Chemehuevis rated well above average and Navajos scored lower on personal than social adjustment. Their two areas of marked weakness being sense of personal worth and withdrawing tendencies. About one-half of the group fell between 1 and 20 %-ile.

We studied individual's tests and followed through on each with interviews from teachers, dormitory staff, data in office and personal interviews.

Some findings indicated:

1. Reading difficulties
2. Self-centeredness; pouty
3. Lack of adjusting to an English-speaking environment
4. Moodiness; bossiness; dishonesty with friends, sneakiness; sensitiveness; stubbornness; health (enuresis, arrested T.B., acne, heart, polio cases, blindness in one eye, hearing, etc.), laziness
5. Family problems
6. Economic problems
7. Religious problems, etc.
8. Very retarded, temper difficulties, teasing, immaturity
9. Unaccepted by tribe--grown up in this environment

Both a sociometric test and the California Personality test were given to 65 ninth grade girls the present school term. There were 36 who scored low (1 %ile - 5 %-ile) on withdrawing tendencies and nervous symptoms. Twenty-two in the same %-ile rank showed anti-social tendencies. When compared with the sociometric test there was little correlation. Those popular on the sociogram scored as low as those who were isolates and near isolates. Six out of 11 in the unpopular group showed withdrawing tendencies or anti-social tendencies. Of 11 isolates or near isolates, two rated as well-adjusted. Five out of 11 in the popular group showed withdrawing tendencies and 4 of this group showed anti-social tendencies while only 2 out of the 11 of the unpopular group showed anti-social tendencies. Totals were much the same for both groups; however, as tools in counseling both tests show some merit.

Comparing the ninth graders on the California Personality Test for this term with those of last year, the percentage of personal and socially unadjusted are much higher than those of last year. There may be many factors contributing to this downward trend.

1. Social workers screen carefully and send many more girls with personal problems to us.
2. Girls are younger and may not have found reasonable security among their peer group.
3. They read better and there may be a considerable bridging the gap of a language handicap.
4. There may be other factors -- more are attending public school and the failures and near failures may come to us, etc. even though they may have improved in speaking English but not scholastically.

Whatever the reasons, we have much to do as counselors to further both personal and social adjustment of this group. We are of the opinion after giving the California Personality Test for two years that it is not an accurate measuring test for ninth grade

Indian girls. It does not point out students with problems as accurately as the sociometric tests which have a higher reliability in predicting drop-outs. The sociometric tests correlates better with teachers and dormitory personnel's comments; however, we feel it has some validity and that we should continue giving it for whatever help it does offer. This test, through personal observation, points up shy girls and those needing to grow socially. Otherwise, it is a very coarse measuring instrument.

In October 1960, sixty-two ninth grade girls took the California Short Form Test of Mental Maturity (Jr. Hi-1957-S-Form). One major reason for choosing this test is its reliability, its treatment of language and non-language and the "Scoreze" with two records of scores. The test is both diagnostic and prognostic, and is a fair measure of student potential. It provides for the level of difficulty of tasks and comprehension relationships. It can also be used in early identification of student difficulties ranging from very retarded to accelerated mental abilities. It is particularly adaptable to those having bilingual background and can be used as an evaluative instrument. It is an important tool to be used by counselors since it provides clues giving insight into strengths and weaknesses of counselees. This test attempts to measure four test areas: (1) Spatial relationship factors sensing right and left, manipulation and two or three dimensional drawings representing spatial patterns; (2) logical reasoning factors dealing with the ability to grasp relationships; (3) numerical reasoning factors showing the ability to recognize numerical concepts. This appears to be the poorer part of the test for Indian girls. It carries a high rating of 30 points. Our average ranged from zero to five which certainly brought their over-all score down. And (4) verbal concept factors measuring comprehension.

We studied the test results individually and by tribes. We made some interesting discoveries. We shall list a few.

1. Apaches -- these girls used poor sentence structure. All spoke Apache in their homes. Only four parents of the group could speak English. Girls coming from these four homes had had very little schooling. About 77 percent scored higher on non-language than language. The test on numerical reasoning brought their I.Q.'s down. They rated with the normal population on spatial relationships. Logical reasoning and verbal concepts were in the order listed.
2. Navajos -- there were 25 in this group and only 4 rated higher on language than non-language. With one exception, all rated low on numerical reasoning, and this same girl scored lowest on spatial relationships. Only 17 parents had any schooling. Seven were unable to understand any English. Their children's sentence structure was poor, their non-language I. Q. higher than language and those attending school away from home appeared to do better on the language I.Q.'s.
3. Hopis -- this study was almost in reverse. They rated lower on non-language tests and also low on language tests as they seemed to have a rather poor experiential English background. They scored lowest on numerical reasoning. They also rated low on spatial relationship.

4. Papagos -- these girls scored higher on non-language. In one case there was a difference of 22 points. They rated high in spatial relationships and lowest on numerical reasoning. Their parents spoke Papago in the home. One girl in this group could not speak Papago.
5. Utes -- rated low on numerical ratings. Rated highest in spatial relationships. All scored higher on non-language tests. One girl showed a gain of 23 points and another increased her I.Q. by 18. Only 3 parents had had any schooling though many spoke some English.
6. Hualapais and Havasupais -- all rated higher on non-language; lowest on numerical ratings and highest on spatial relations. Both English and native language spoken in the home. Only six parents had attended school.
7. Pimas -- about equal on language and non-language. Lowest score numerical reasoning; highest spatial relationships. Only one parent had not attended school.
8. Maricopa -- rated higher on non-language; lowest on numerical reasoning and highest on spatial relationships. Both English and Maricopa spoken in the home. All parents attended school and none withdrew below grade 8.

In summary, Navajo girls coming from T.B. Sanatoriums did better on language than non-language tests. Those attending boarding schools in cities or small communities did better on language tests. Hopi girls scored higher on language than non-language tests. Interviews revealed new approaches needed for those scoring very high or very low in any of the areas tested. A study could well be made to determine why girls as a whole rated lowest on the numerical reasoning test. Test results made necessary a personal data sheet on home background for more pertinent information and understanding of testees. The mean I.Q. for language was 76.6 with a maturity grade placement of 6.5. The mean I.Q. for non-language was 82.9 with maturity grade placement of 7.5.

In January, 1962, the above test, California Short-Form Test of Mental Maturity, was given to all Freshman girls except those enrolled in C tract which was given later. The mean I.Q. on language being 81.9 as compared to 76.6 in 1960. This shows a gain of 5.6. Two factors may have accounted for this. Girls enrolled this year are younger as compared to last year's group and all freshmen have been placed in class groups according to ability (those enrolled in C track will be treated separately). On the non-language test the mean I.Q. is 87 as compared to 82.9 the previous year. The gain was 4.1. Scores ranged on language from 109 to 60 as compared to last year's scores of 105 to 60 and on non-language from 125 to 76 as compared to 104 to 54. On spatial relationships 30 girls scored 50 %-ile or better than National norms on this particular area of the test. The range being 90 %-ile to 2 %-ile.

Last year's tribes showed definite trends on certain tests. This year's cut across tribal responses on a more individual basis. There were not so many glaring inconsistencies by tribes. It would seem freshmen girls are younger and better prepared to do ninth grade work.

The test may not indicate better school adjustment but out of the total number enrolled only one has dropped out of school as compared to 5 in the senior class. This would be an interesting observation to follow year after year through successive graduations.

At first, we felt 9 C track girls were probably too low scholastically to take the test; however, the more we discussed the matter the more intriguing the subject became. So, tests were given to 61 girls enrolled from 9 C 1-2-3-4 section. Findings indicated Track C 1 and 2's were much higher than we thought. Six ranked well above the means for A and B Tracks in both language and non-language tests. There were 8 C 1 and 2's who had 16 points or more difference between language and non-language I.Q.'s. Groups 9 C 3 and 4's scored much higher on non-language than language. The latter's chronological ages ranged from 15 to 21. Interviews with these groups indicate many have been in and out of school or have been in school for only three or four years. We hope to compare ages of the 9 C Track with those enrolled in A and B Tracks.

Some of our objectives on the above test will be:

1. To determine how accurate a measurement the test is for our Indian freshmen.
2. To measure the reliability in pointing out students who are language handicapped. For example, one of our girls scored 125 I.Q. on the non-language and 76 on the language. Is she an exceptionally bright girl with a language handicap or does the test measure what it is supposed to measure?
3. To establish local norms when enough scores are available.
4. To find out if an especially high or low score is acquired by accident.
5. Out of all sections of outgoing ninth grade girls we propose a controlled group of about 30 girls and a similar number of uncontrolled freshmen. Special efforts will be made by counselors to orient the controlled group as to their needs, special assistance and other needs.

The above test compares favorably with the California Achievement, Otis Gamma and Iowa Silent Reading tests. One interesting finding in almost every case is that the highest I.Q. on the California Mental Maturity test compares favorably to the Otis test. This held steady for almost every freshman tested.

All of our testing is for the purpose of better individual counseling. We give the students their reading and Otis Gamma or potential scores. These are carefully explained to tenth grade girls in assisting them to make wise vocational choices.

Incidentally we are keeping all our test papers so that better studies may be made, if and when, we increase our guidance staff so more time can be allotted to needed studies.

EXPERIENCES AND PROBLEMS IN NAVAJO HEALTH EDUCATION

Cyla Brooks, R.N.

For the past two years it has been my privilege to work closely with the Navajo Health Visitors at the Navajo - Cornell Field Health Research Project at Many Farms near Chinle, Arizona. This Project, jointly sponsored by the Navajo Tribe, Cornell University College of Medicine, and USPHS, opened in May 1956, after extensive ground work was done in the area to determine the population to be served and the needs of that population.

One of the earliest research studies to get underway was one to find out how well Navajos with limited formal education (but with the ability to speak both Navajo and English) could be trained as ancillary personnel, to assist the doctors in out patient clinic and to aid the public health nurse in the field.

Selection of the trainees was made on the basis of age - those over twenty-five being given preference - for a certain maturity was deemed to be necessary; next, on the level of education attained - high school graduates were not sought lest their degree of acculturation limit their acceptance by their own people. Most of those chosen had dropped out of school, for one reason or another, at grade seven or below. Also, all of those accepted were from traditional families living in hogans and whose parents did not speak English. In fact, the fathers of three in the group with which I worked were medicine men. Of necessity, the classes were limited to four persons, because of scarcity of housing - two women and two men were in each group. All were married and had families. Experience as a hospital patient was considered at first to be a worthwhile pre-requisite, but such selectivity was not always possible, and actually, little difference was seen in the amount of empathy felt toward patients.

Training began with formal classroom teaching and practical demonstration in clinic and field work. A Navajo with a high degree of proficiency in English "sat in" on the lectures and transcribed them word for word into Navajo for the students. When they eventually began to work in the clinic, he took tape recordings of their conversations with patients and their interpretation of the doctors' findings and recommendations. These were then played back to them and discussed and criticized constructively in class. Practical procedures such as giving immunizations, doing simply dressings, and assisting with physical examinations were done under strict supervision. Evaluation of performance was open and frequent. Concurrently, their field work progressed. At first they made hogan visits with the public health nurse, but as they became more proficient, they were permitted to make visits alone, for health supervision of mothers and babies, to invite people to clinic for follow-up on a known diagnosis, or to secure permits for surgery or hospitalization. Their work was assigned each day by the public health nurse, and the write-up of visits on the patients' chart was carefully read and discussed with them.

Since the health visitors' most important function was to help the physician and patient understand each other, facility in both English and Navajo was a must, but it was apparent early that the ability to speak two languages didn't always make one a medical interpreter. One of the greatest problems was in the poverty of the Navajo vocabulary itself. For instance, there is not the profusion of adjectives, so one must resort to qualifying phrases such as; it is big or small, or soft or hard. Likewise there is no word for color, so when a patient attends clinic complaining of vomiting or coughing up sputum or having diarrhea, the health visitor must run the gamut of - was it green, or red, or yellow? That is why, when the doctor asks, "What color was it?", a long conversation ensues with a one word finale. This can be quite frustrating to the novice who may expect a complete description of the complaint after such a degree of wordiness. As in the difficulty with color, so with a true pictue of pain. Navajos are not used to differentiating in regard to pain - whether it is sharp, dull, piercing, burning or what. A pain is a pain, and any attempt to find out more is a waste of time.

The health visitors displayed an excellent first hand knowledge of anatomy, from their experience in butchering sheep, the anatomy of which most nearly resembles human anatomy. But again, while the Navajo has a complete vocabulary for the skeletal system, there are no terms for the circulatory or nervous systems. What proved to be most disconcerting was that there is only one word for heart and lung, in fact one word serves for all the organs contained in the chest cavity. So, in visiting a patient who had severe tuberculosis, requiring the removal of a lung, it took lengthy explaining to assure him that the surgeon was not going to cut out his heart. Some attempts have been made to make Navajo a written language, but the results have not proved to be very useful to the Navajo health workers.

Another problem pursuant to teaching health concepts to the health visitors was their utter lack of comprehension of the nature of disease. They believed in contamination by "contagious magic" rather than the germ theory. In practical demonstration they preferred to wash their hands afterward rather than before, to protect themselves instead of being concerned about passing on disease to another patient.

Still another problem was that of time concept, or lack of it. It is very difficult to get an exact description involving short periods of time, such as - how long has someone been ill, or how long do you boil the water for the baby's formula? We soon learned that Navajos are not clock-oriented, so, short of using an hourglass, we resorted to another timing method and told the patients to boil the water for the babies' formula as long as it takes a medium sized potato to cook.

As a bridge from hogan to clinic, the health visitor is extremely valuable. While he does not attempt to diagnose, he has been taught to take temperatures and observe symptoms and report them back to the doctor. Two of the field cars are equipped with radio-telephones and it is possible for the health visitor to call the doctor from forty miles away and describe a patient's condition and follow directions for his immediate care. In some instances, serious complications have been avoided by this prompt "feed-back". The health visitors recognize their limitations and do not attempt to practice medicine. However, they are aware of thier responsibility to their patients, and act accordingly. They have not broken ties with their own people and still identify with reservation life and feel a strong desire to help those in their care.

Many taboos exist in Navajo culture, and at first we were not aware of them. In our eagerness to learn a patient's personal and family history quickly, we were guilty of asking questions which Navajos do not ask one another. Fortunately, the health visitors were quick to help us "save face" and avoided many pitfalls for us by not asking the questions, if they were likely to be resented or misunderstood.

The health visitors' competence has increased steadily, and they have been able to give real meaning to the doctor-patient relationship, which would indeed be a mute communication without them. Their oral contributions will always excel their written work, but certainly we can forgive lapses in grammar and spelling if the patients are receiving understanding and sympathetic care. They have been most helpful in explaining Navajo concepts to us so we could draw up an interpretation which would satisfy both folkways and science. They were reluctant at first to believe that we were really interested and not just curious about their people and culture. They have needed patience and guidance and much trust in order to become self-confident. Happily, mutual respect has enabled us to overcome most of the problems which some said would be unsurmountable.

SOME IMPLICATIONS OF THE NAVAJO HEALTH EDUCATION PROJECT FOR INDIAN EDUCATION **

Paul R. Mico, M.P.H.

Introduction. A review of the proceedings of the 1960 and 1961 conference of the Arizona Co-ordinating Council for Research in Indian Education (1, 2) indicates that there is a healthy concern about the problems of Indian education in Arizona and that the methods being utilized to resolve the problems are constructive. This Council is to be commended for the objectives it has undertaken to achieve, in the pooling of results of educational researches so as to benefit all those who are interested.

One of the important objectives of education is to enable the individual to live best with what he has to live with; mentally, physically, and socially. This infers good health. There is overwhelming evidence to show that the level of health among Indians in general and Navajo in particular is far below that of the general non-Indian population.

The Navajo Indian Reservation is the largest in the United States, covering 25,000 square miles of land located predominantly in the northeastern part of the State of Arizona, as well as in southeastern Utah and northwestern New Mexico (3, p. 1). The population is presently estimated at 93,000.

The responsibility for the public health and medical programs carried out among the Navajo rests primarily with the United States Public Health Service, Division of Indian Health, ever since it was transferred to this agency from the U. S. Department of the Interior, Bureau of Indian Affairs, by Congress, on July 1, 1955. High death and disease rates, particularly among infants and young children, casued by enteric, respiratory and other communicable diseases and by poor environmental sanitation practices, are the problems toward which the greatest program priorities have been focussed (4, p. 86-98; 5, p. 42-50). These problems are amenable to the educational approach.

The need for an effective health education service in the Indian health program

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** This paper is a product of the Navajo Health Education Project, which is being carried out by the University of California School of Public Health, under a contract with the Health Education Branch, Division of Indian Health, U. S. Public Health Service, Department of Health, Education and Welfare. The author is a member of the University staff working as the Project's health educator in the Tuba City Service Unit, PHS Indian Hospital, Tuba City, Arizona.

was cited by Dr. James R. Shaw, Chief of the Division of Indian Health, in a letter[1] to the University of California in 1955, when the negotiations were in progress which led to the development of the Navajo Health Education Project.[2] He said, in part:

> "We are faced with the problem of improving the health of the American Indians from the present low status to a level more nearly in line with that of the country as a whole. This cannot be accomplished alone by increasing hospital and clinic facilities or by enlarging the health staffs. There are generally vast differences between Indians and non-Indians in language, customs, cultural patterns, health concepts and social organization. The trend toward integration increases the need for interpretation of services and health practices. Preventive health practices, to be effective, must be presented in such ways as to assure acceptance and understanding by the Indian people, who themselves comprise many tribal groups with variations in customs and beliefs and different degrees of acculturation.
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> "This requires an educational and anthropological approach to the Indians and to staff which will assure an adaptation of modern public health and medical procedures and a valid cross-cultural communication of ideas. Obviously, this must take palce at the point of contact between the Indian and the service program and we believe it must take place in the setting familiar to the Indian - the reservation, the trading post, in the home, at the school and so on. Nor do we feel an interchange of this nature can be confined to health workers alone; we must utilize the knowledge, contacts and skills of other groups who work with the Indian people.
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> "This means, first, that all of our health personnel must become even more aware of health educational methods and materials, and, second, that

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[1] Correspondence of March 1, 1955. From James R. Shaw, M.D., then Chief, Branch of Health, Bureau of Indian Affairs, to Dr. Thomas N. Barrows, Associate Director, University Extension, University of California. Later duplicated and distributed. To be found in the files of the Health Education Branch, Division of Indian Health, Navajo Health Education Project.

[2] The Division of Indian Health eventually entered into contractual agreements with two Schools of Public Health: the University of California and the University of North Carolina. The California Project was planned for the Navajo Indian Reservation; the North Carolina Project was established with the Pueblo Indian tribes in the Albuquerque Area, Division of Indian Health.

we need a corps of individuals who will function full-time at reservation and community level in organized activity in health education."

The Navajo Health Education Project. In review, the Navajo Health Education Project has been a two-phase field operation of the University of California School of Public Health. Phase One was in existence from July 1, 1955 to August 31, 1959, and was headquartered at Window Rock, Arizona, which is the central administrative Field Office of the Division of Indian Health for the Reservation. It had as its purposes the development of a Reservation-wide program of health education activities. This included the recruiting and training of professional-level Community Workers (Health) and sub-professional Community Health Education Aides, who were then placed on duty at various health centers throughout the Reservation. The Phase One staff was composed of two public health educators throughout its operation, and a social anthropologist who served during Fiscal Year 1959.

Phase Two was set up as a three-year operation, beginning on September 1, 1959, and ending on June 30, 1962, at which time the Navajo Health Education Project will formally close its operations. Its purpose has been to construct a framework of highly-intensified health education activities, performed at the local level, that would contribute to the goals of the Division as well as to the health education program and research interests of the School of Public Health. Its headquarters was relocated from the Window Rock Field Office to the Tuba City Service Unit. This is comparable, in a sense, to moving from a state to a county level.

The Tuba City Service Unit is one of eight on the Reservation. It occupies 4,404 square miles of the western-most part of the Reservation and has a population estimated at 9,000, although estimates from other sources vary from 6,000 to 15,000. There is a 75-bed general medical care hospital, which is accredited, and a field health program with dental, health education, and sanitation services. The majority of the adult Navajo population has had little or no formal education and cannot speak English.

The Phase Two Project has been service-oriented. The health education activities were developed as an integral part of the health and medical services offered to the Navajo. Research was conducted concurrently, along lines that would increase understanding of Navajo health behavior and bring to light the factors which may facilitate or block the acceptance of the health and medical services. Three focal points were identified for study. One was the Hospital, in which the health education opportunities in an Indian hospital could be explored. Another was Health Opinion Leadership, on the premise that individuals, Navajo or non-Navajo, who influence the Navajo with respect to health attitudes, motivation and behavior, can be identified and consequently educated to contribute significantly to the goals of the program. And the third was the Navajo Community, on the assumption that Navajo people, who have an adequate understanding of the preventable factors contributing to their disease and disability problems, and of the resources available to them, would develop desirable individual practices and participate in group activities in order to prevent disease and maintain a higher level of personal health.

The health education staff of the Tuba City Service Unit has been composed of two cooperating groups: the Project's [3] public health educator and social anthropologist; and the Division's permanent employees, who are a community worker (health) and a hospital health education aide. Both of the latter were recruited and trained by the Phase Two Project, which was responsible for the development and original demonstration of the hospital health education aide position.

By and large, Phase Two has been carried out as planned, with no changes in either staffs to disrupt continuity. This long term study, conducted on a local level where activities could be initiated and carried through to completion, has been very productive in terms of our criteria.

Some Relevant Conclusions. An attempt will be made here to report on some of the Phase Two conclusions, which are relevant to Indian education. No thought has been given to their placement in terms of importance.

1. Causation of Disease. We, like many others, find that the Navajo's conception of health and disease is very different from that which most non-Indians and public health workers have (3, p. 15). For him, health is part of a correct relationship between man and his super-natural environment, the world around him, and his fellow man. A precise, prescribed behaviour must be followed if the correct relationship is to be maintained, which in turn guarantees spiritual, social and physical wellbeing insofar as possible in the Navajo's complex and dangerous universe (7, p.2-3). "Well-being" infers "good and beauty, or harmony," which describes the balance and perfect functioning of all parts plus the exalted feeling which accompanies this desired state. Whatever is not in this desired state may be called sickness, whether it is disease in the physical or mental sense or is a disturbance in the physical or social environment. Thus it can be seen that disease is viewed by the Navajo as a state of disharmony caused by a transgression of the prescribed behavior or by witchcraft. The specific diagnosis is nade by a native diagnostician, or hand-trembler, who suggests the kind of "sing" or ceremony that must be performed if the patient is to be cured. The family then contracts for the services of the "singer" or medicine man, who knows how to perform the required ceremony.

This is vastly different from the concept of "disease caused by bacterial or viral infection" as held by non-Indians. It is difficult to teach the Navajo the "germ theory". One reason is that there are no corresponding concepts, words, or phrases in the Navajo language to adequately describe "germ" in that language. Another reason is that it is difficult for the Navajo to perceive that disease and death can be caused by something so small as to be invisible to the naked eye.

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[3] Co-directors were William Griffiths, Ph.D., and Beryl J. Roberts, Dr.P.H., Professor and Associate Professor of Public Health respectively. Dr. Roberts is the Project Administrator. Elizabeth W. Clark, M.P.H., is the Project Coordinator. Jerrold E. Levy, Ph.D., is the Project Anthropologist.

Changes made in the behavior of the Navajo with respect to personal hygiene, environmental sanitation, food preparation, infant care, and home nursing appear to be accomplished more on the basis of a desire for quality living than of an adequate understanding of the germ theory.

2. Motivation for the utilization of medical care. Levy reports a significant motivational characteristic of the traditional Navajo (7, p.4): he comes to the hospital or clinic not to be cured but to obtain relief from painful symptoms. The curing of the individual's illness can only be effected by an elaborate healing ritual performed by the medicine man, or singer; symptomatic relief of pain or discomfort, pending the ceremonial cure, may be obtained from Anglo medical practitioners,[4] Navajo herbalists, Hopi medicine men and even Christian faith-healers - all are perceived as having equal role and function, that of providing relief from painful symptoms.

The implications of this factor are obvious. The physician who is fortunate in having patients whose diseases can be cured or whose symptoms can be alleviated by one "shot" or so, is regarded as a good doctor. On the other hand, the physician who must treat a patient on the basis of several visits in order to achieve a cure, or the patient who has a chronic disease which cannot be cured without long term treatment, if at all, faces problems. The patient may not continue to take his medicine or return for follow-up visits once he begins to feel good. Also, he may become disgruntled and go to another source for symptomatic relief, thereby breaking the continuity of a treatment program.

Problems are created by hospitalized patients, frequently in serious condition, who want to go home to have a "sing" performed at a time when the interruption of medical care may be fatal. Unless the problems are resolved satisfactorily, the patients may leave the hospital against medical advice.

Shots and X-rays are seen by almost all Navajos as guaranteed to give relief to symptoms, and the physician who is new to the Reservation often has a hard time remaining calm in the face of the frequent demands for these services, whether they are needed or not.

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[4] Members of the Public Health Service, missionaries, and private practitioners who are of the dominant Anglo culture.

3. Perception. Perception is the process of being consciously or subconsciously aware of the objects and events which enter into the experience field of the individual, reorganized mentally to meet his social and emotional needs (8, p. 4). Knutson says, "Our Perceptions are our sole means for maintaining an awareness of ourselves and other things (9, p.1706). They serve us in filtering out things of immediate importance to us, and bringing them into meaningful focus. What seems unimportant or unchanged tends to be ignored."

Needless to say, there are significant differences in perception relating to health and medicine existing between the Navajo and the Anglo. These differences result all too frequently in the creation of imposing barriers to the Navajo's utilization of health resources, as well as in a breakdown of services provided effectively by public health workers.

The Navajo perceptual field is dominant, dynamic and culture-bound. There is being introduced into this field the strange and foreign symbolism of another culture-the public health and medical concepts of the Anglo culture. The people are encouraged to seek immunizations, attend prenatal and postnatal clinics, bring infants to well-baby clinics, learn to make sterile formulas for infants, make changes in their diet, build European-style houses in place of the hogan, build and use toilets, eliminate garbage and refuse by burial, understand how germs transmit disease, use water only from safe sources, purchase Individual Home Water Storage Units, come to the hospital or clinic only during working hours when it is usually necessary to wait the longest before being seen, come for treatment in the earliest stages of sickness, continue to take medicines as prescribed even after the symptoms are relieved, return for medical check-ups even though the illness seems to have gone, and follow many other health practices. These practices are perceived by non-Indians as ways of preventing disease and promoting good health.

The Navajo, as pointed out before, perceives health and religion as one and the same, in which well-being is the existence of a correct relationship between man and his natural and supernatural environment. Sickness is caused by a disturbance of this delicate balance. An exactly-prescribed Navajo ritual must be performed to cure the sickness and restore the harmony. If physical pain and discomfort persist, symptomatic relief may be obtained wherever it can be had. One of these sources is the Indian Health hospital or clinic, known to the Navajo as "white man's medicine." Shots and X-ray are regarded as the most effective of "white man's medicine" in relieving symptoms.

In essence, then, the Anglo culture, through public health, is forcing changes in the Navajo's traditional way of looking at things. Hartley and Hartley say that these changes, introduced from outside of the traditional cutlure, makes the traditional culture, makes the traditional perception inadequate and therefore produces a state of discomfort which lasts until a new adjustment can be made (10, p. 257-258).

Suffice it to say that a state of discomfort has been produced in the Navajo perceptual field which is far from being resolved. This is because the changes being introduced are frequently not based on the genuine needs of the people who are to be changed and are not adapted to fit into their existing behavioral practices and perceptual framework.

4. Discussion-decision processes. (11, p. 78-80). A major understanding necessary for the practice of good health education is that of the methods and processes by which people make decisions, with the decisions so binding as to motivate the follow-through behavior necessary on the part of the people involved.

While much about this factor of human behavior has been documented as it pertains to the general non-Indian society of the United States, a great deal needs to be known as it pertains to cross-cultural situations. Both the Project educator and the anthropologist gathered data in this area from their respective viewpoints. Many joint and separate experiences, in the hospital and in the field, in formal and informal settings, have been documented. Two generalizations can be made which will be of vital significance to those who would work more effectively with the Navajo.

A. The Role of Information in Navajo Discussion. In the sophisticated Anglo culture, the means and processes of communication have been developed to such a high degree that it is within the realm of an individual to learn enough about the various factors to be considered in everyday decision-making as to make a wide variety of routine decisions, as a matter of course. The individual brings with him to the group a valuable store of information which can be utilized by the group as a resource in the course of its deliberations. Rare is the group in the non-Indian culture which does not have at its command the resources, or the means of obtaining the resources, necessary to make decisions relative to its objectives.

Such is not the case with the Navajos. Too often, however, those who would work with the Navajo make the assumption that the Navajo group and the non-Indian group are the same in this respect.

Time and again a Navajo group, whether it be a family in informal discussion or chapter group in formal meeting, has been observed as not being able to reach a decision about the problem being discussed. This was because it did not have enough information concerning that problem and its implications to make a decision that would be binding on the members involved. Moreover, the group did not have the understanding of the problem, in terms of descriptive concepts, to circumvent the existing language and cultural barriers. What often happens is that a public health worker presents the Navajo with a decision to be made. When the decision is not made because its purposes or effects are not known, the worker concludes that the Navajo cannot accept responsibility or is not being cooperative. It has been the experience of the Project staff that when enough information has been made available to a Navajo group to enable a decision to be made, a decision is made which is usually a constructive one.

The worker does well who carries with him an adequate understanding of his own programs, and of related programs, as he works with the Navajo.

B. The Role of Discussion in Navajo Decision-Making. When a Navajo group is confronted with a decision to be made, it prefers to have the time necessary to discuss the pros and cons of the decision until all significant factors have been aired and until the decision reached is more or less a consensus of its members.

This process of the group resolving the concerns of its members, and the resulting unanimity, may well account for the consistent statements made by patients that they themselves made the decision to come to the hospital or clinic, for example, rather than them naming someone else as having influenced the decision. This came to light as a part of the Project's interests in learning who influences patients to come for treatment.

The worker who is in a hurry for a decision may often experience the frustration of not getting one because he has not taken into consideration the importance of thorough discussion in the decision-making processes of the Navajo.

5. Roles. Navajo employees of public health were studied to determine what kind of a role they played in influencing others around them, either at home or in the community, in matters of health. The Navajo-speaking employee is not seen as a health opinion leader within his or her family unit or community unless he or she occupies a leadership role otherwise. The impression of the Project field staff is that few Navajo employees have enough knowledge about any one program to be able to satisfy the need for information on the part of the requesting family or community group. This is due partly to the cross-cultural breakdown in communications which exists, and partly to the role played by the usual Navajo employee in the public health organizational structure. The usual role played is one of a sub-professional worker, because of the lack of education and training necessary for higher level positions. Therefore, these employees are rarely involved in program planning and administration. As discussed before, both adequate information and adequate discussion are necessary if the Navajo group is to make desired decisions and carry them into action. Therefore, the Navajo employee who does not possess the information needed is either reluctant to play the role of the resource person or is apt to play the role of blocking constructive action, if he is negatively inclined.

Implications for Indian Education. The conclusions discussed above were selected from many becuase they contain within them certain significant implications for Indian Education in general. They are as follows:

1. Curriculum planning. The World Health Organization, in a recent publication, discusses this problem adequately (12, p. 5):

> "Today school administrators and teachers are confronted with a most difficult task. The adequate teaching of basic subjects (reading, writing, and arithmetic) remains a vital necessity. Knowledge of other subjects is expanding rapidly, and in consequence a greater demand is made by them upon school time. Cultural changes, closer relationships among the peoples of the world, the rapid development of the sciences, and other conditions are constantly increasing the body of knowledge which society would like to impart to its children and youth. There are limits to the work load which can be carried by pupils and teachers. Effective health education seeks to help them carry this load, not to add to it.
>
> "Appropriate knowledge in the health field is vital to the individual, but it is knowledge with which the basic subjects may be readily associated and which, in part at least, may be readily correlated with learning experiences in the social sciences, natural science and other subjects.
>
> "The development of the body and the personality of the pupil cannot be disregarded in education. The place of health education in the curriculum should be determined by its value to the individual and to society ---"

Attention must be paid to the fact that the level of Indian health today is at a point where the non-Indian population was 20 to 30 years ago. It is a serious problem and if the long range goal of raising the level to that of the non-Indian population is to be achieved the present and future generations of Indian children and youth, who are in our schools today, will have to be prepared more effectively for healthful living.

2. Course content. Other agencies in the past have reported to this Conference on the problems of teaching the "germ theory" to Indian people. We wish to add our emphasis to this need. An adequate understanding of this concept is vital if preventive health practices are to be adopted because they are understood.

Children and youth should leave school with an understanding of human physical, mental and emotional development. They should have an appreciation of personal health, which includes a knowledge of anatomy and physiology, nutrition, first aid and safety, stimulants and narcotics, periodical medical and dental care, and family life. They should also have an understanding of community health programs and problems, and the health resources available to them as citizens of the community.

Understandings of these subjects will help make for a smoother adjustment in the perceptual field of the Indian who is experiencing change. The causes of disease will be better understood, which in turn will help change the reasons which motivate him to seek Anglo health and medical care.

3. School health program. Every school child and youth deserves to benefit from an adequate school health program. This includes a program of effective instruction at all grade levels, whether formal or informal; school health medical services, to provide him with health and medical supervision throughout his school years; and a safe and sanitary school health environment.

These aspects of the program will provide for the meaningful, health-learning experiences of the school child which are necessary in developing desirable attitudes and practices in adulthood.

4. Health Career Development. If the role of the Indian is to have greater meaning in the planning and development of public health programs among Indian peoples, more Indians will have to be motivated and trained for the varied professional, medical and para-medical positions which are available, career-wise. This involves both the creating of the opportunity to learn about the various health careers, as well as the necessary academic preparation at the secondary level for admittance into the collegiate level program desired.

5. Problem-solving activities. One of the most effective methods of education is the group discussion-decision approach, wherein the group helps identify a problem for solution and carries through with the activity until the problem has been resolved. Experiences of this nature are seen as having great carry-over value and cannot be emphasized too strongly. If community groups are to be successful in solving their problems they must learn how to work together in groups.

Beasley reported to this Conference last year on some successful experiences in problem-solving (2, p.74-75) among Navajo children. Orata, to mention another, writes about a successful experience in problem solving among Indian children which involved the interest and support of parents also (13, p. 207-211).

One factor is usually evident to public health educators who work in Indian health programs. There are few voluntary groups composed of Indian members who are donating their time and efforts to help solve their own tribal health problems, like the many health-and-welfare-oriented groups who besiege us in non-Indian communities. Where these groups are being organized, though, they are effective. Keneally[5] has reported on several of these experiences in the past. Bronson, one of his community workers (health), describes the success of 14 Apache women who make up the voluntary San Carlos Apache Hospital Auxiliary (14). They help at well-baby clinics, help orient new public health personnel, encourage people to attend special clinics, raise funds for health improvements, and are now involved in projects to help improve housing in the community as well as provide teen-age girls with a constructive program of summer activities. It is very gratifying to see this kind of development.

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[5] Henry J. Keneally, Area Health Educator, Phoenix Area Office, U.S.P.H.S., Division of Indian Health.

Havighurst and Neugarten reported on a study which has some implications for understanding the motivational drives of Indian children (15, p. 195). This may be of some interest to the members of this Conference because of the concern expressed during the past two years about the lack of proper motivation among the children and youth.

The study involved Papago, Hopi, Zuni, Zia, Navajo and Sioux Indians, compared to the white children of "midwest", a small midwestern city with a surrounding rural trading area which was supposedly "representative of the kind of community most frequently found in the middle-western part of the United States."

Part of the study was concerned with determining whether the children were "self-centered" or "other-centered" in terms of needs and interests. It was found that the Navajo children and the children of Midwest were "highly self-centered," with the criteria of "self-centeredness" being: Individual achievement, Self-restraint, Self-gratification, Competence, and Personal virtues. The three Pueblo societies of Hopi, Zuni and Zia were found to be highly other-centered, with the criteria of "other-centeredness" being: Regard for others, Service, Smooth personal relations, Relations with authority, Discipline and authority for others, Aggression toward peers, and Aggression by others. The Papago were found to be even in terms of "centered" trends.

6. In-service education of teachers. Health education is not always recognized as a discipline of its own and given its rightful place in the program of the teacher training institutions (12, p. 8). The curriculum and course content are usually inadequate, there is a lack of qualified instructors and appropriate resources and, generally, teachers leave college not equipped to teach health effectively to students.

Because there is usually a genuine need and interest in a better school health program on the part of the students and teachers alike, teachers soon turn to in-service education programs to develop a higher level of skill in health education. Numerous resources are available to schools and teachers who are interested in in-service training. Among these are universities and colleges, state departments of education and public health, regional offices of Indian Health and the Public Health Service, and voluntary health agencies.

Attention is called to A Syllabus for Teachers in Navajo Health, developed by the Cornell University group at Many Farms (16). This is a good resource manual which would be of value to those who teach health to Navajo children and youth.

7. Research. Obviously, there is a need for the continued support of this Conference and for formal contributions from its members in the area of school health and health education. Specifically, there is need for the study of the methods of

health education which are effective with Indian students, and for the development of better teaching materials and audio-visual aids and assessing their effectiveness. Studies are needed in the health attitudes, motivation and behavior of Indian students, with comparative data on their parents and tribal groups. The continuity of health teaching at various grade levels needs to be developed also. Pilot projects should be developed in schools, communities and teacher training institutions to promote better health education.

These are only a few of the research needs. The social sciences of psychology, sociology and anthropology should be looked to by educators as valuable resources to be considered in bringing to the solution of the health education problems the constructive viewpoints and contributions of related disciplines.

Summary. This paper has attempted to describe the Navajo Health Education Project and the problems and needs which led to its development. A few basic conclusions were presented which are relevant to the needs of Indian education in general, and the implications of these were discussed briefly.

In conclusion, Health Education in schools should be based on the health needs and interests of children and youth, which are to be met by the home, the community and the school working co-operatively. This must be an important part of the total health and medical program of Indians if the long range objectives of the Division of Indian Health and our Anglo-American society are to be realized.

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TATTOOING AMONG PAPAGO STUDENTS

Edward C. Hinckley

I am very honored to be appearing before you this afternoon. I would have been sufficiently flattered to have been in the audience these two days; when Mr. Bernardoni asked me to make a report, I was quite overwhelmed. I want to emphasize that the report I am going to make is in no way the end of a job of research. Rather it is merely a description of the beginning of a project, and I would like to apply to all of you for advice and suggestions as to how we might proceed.

The subject of this report is Tattooing Among Papago Students. The interest in this subject came about as the result of concerns on the part of the Papago Agency Child Guidance Committee. This group of people, which meets every two weeks in Sells, represents the Bureau of Indian Affairs, the Papago Tribe, the Public Health Service, and the Franciscan Missions. I would like to read to you a list of members of the Child Guidance Committee of the Papago Agency, not only so you may become acquainted with the representation, but also to pay tribute to them, since without their whole-hearted support and cooperation, this report would not have been possible. The members are as follows:

Mr. Thomas St.Clair, Papago Agency Superintendent
Mr. William Whipple, Reservation Principal (Chairman)
Mr. Wendell Cordle, Sells School Principal
Mr. Randolph Aros, Criminal Investigator
Mrs. Frances Richardson, B.I.A. Social Worker
Mr. Santiago Rodriguez, B.I.A. Social Worker
Mr. Charles Whitfield, Branch of Land Operations
Mr. George Quinn, Adult Education Teacher
Mr. Eugene Johnson, Tribal Councilman
Mr. Cipriano Manuel, Tribal Judge
Mr. Jack Keiffer, Medical Social Worker, P.H.S.
Mrs. Lueda Martin, Public Health Nurse
Father Solano, O.F.M., Topawa Mission
Mr. Edward Hinckley, Training Officer (Community Health)

Last Fall, at the suggestion of Mr. Whipple, as inquiry was begun into the extent of tattooing among Papago students. This was occasioned by certain isolated cases of which we were aware; cases where the extent of tattooing on these individuals amounted to permanent disfigurement. Accordingly, questionnaires were sent to the Principals of Phoenix Indian School, Sherman Institute, St. John's Mission School, and to the five Bureau and four Mission schools located on the Papago Reservation. The replies to these questionnaires seemed to indicate the the practice of tattooing first occurs around the sixth grade level (though there are isolated cases among younger children) and increases in frequency from the sixth grade on up. For this reason, there seems to be more tattooing among the older children in off-Reservation schools, the tattoos being applied with approximately equal frequency at school, during the school year, and at home during the summer months.

At this point, it might be well to explain more precisely what kind of tattoos we are referring to. These are not, as a rule, professional-looking marks with definite "artistic" designs. Rather, they resemble more frequently the jottings and scribblings which we might find on any of our telephone memo pads, and seem to possess no rhyme nor reason. They are generally created by writing on the skin with ink, and then scratching the inked place with a pin or a nail until blood appears. This process may be repeated three or four times, depending on the "dedication" of the student. I would like to read to you a couple of descriptions of individual Papago students' tattoos - these are from Phoenix and Sherman.

The first is a boy:

> "Thirteen tattoos on right arm. Twenty-four tattoos on left arm. Cross and three dots on forehead. Cross and three dots on chin. Also two dots on each ear."

The second description is that of a girl:

> "Bad mark on left arm. Mark high on upper arm. Both legs marked. Dots on face."

In terms of acceptance by the general Anglo population of today, I think you will agree with me that facial tattoos would be the most universally disapproved. You will note from these graphs that the percentages in all categories is almost identical for both boys and girls, and that almost half of those students having tattoos have facial ones. (Percentages Boys: None -16.2% Face - 38.4% Arms and Hands - 45.4% Girls: None - 16.4% Face - 36.9% Arms, Hands and Legs - 46.7%.) Incidentally, the sizes of the populations represented by this study are 99 boys and 122 girls.

This, then, is the problem. Its implications, from the point of view of health, are many. First of all, there is the very real danger of infection, either in the process of application or in attempts at self-removal. It is hard to say how often students try to remove their tattoos after they are applied, but in the cases with which we are acquainted, the attempts have been unsuccessful - either resulting in evidence of the tattoo remaining, or in even more disfiguring scar tissue. From the standpoint of mental hygiene, there seems to be something definitely "unhealthy" about this practice. I can remember drawing on my hands while in high school, and pretending that the marks were tattoos - but to go so far as scratching the marks until they bleed, and then applying more ink in the wound - this is going a little beyond the "normal" juvenile patterns of our society.

Another implication is the relationship between the practice of tattooing and juvenile behavior. We are not equipped, at this time, to determine which comes first, but there seems to be a definite relationship between extensive tattooing among juvenile Papagos and their rebellion against various types of authority. Among the people I have talked with informally regarding this aspect of the situation, including Dr. Edward Spicer, Dr. Bernard Fontana, and Dr. Norman Greenberg of the University of Arizona, the concensus seems to be that a Papago boy (or girl), having permanently marked himself, and being unwilling to admit that he has made a mistake, begins to "live up to " his marks, by acting like a "tough guy". This type of behavior is also recognized by various law enforcement officers, who tend to type tattooed juveniles as "Pachucos" or as people possessing Pachuco-like characteristics - in this way, tattoos seem to have some of the same social implications as duck-tail haircuts and black leather jackets.

The most serious, long-range result of the practice of tattooing, as I have already indicated, is that of non-acceptance among Anglos. A seriously tattooed boy or girl is going to have difficulty, we can assume, in trying to get a job which brings him in contact with normally conservative Anglos. In this line, we recently had a middle-aged Indian woman come to the Sells Indian Hospital. Many years ago, while a student in one of the off-Reservation Indian schools, she had tattooed her left arm quite severely. Since that time, the marks have been a source of much humiliation for her, and now - prior to beginning some type of vocational training - she wants the marks removed. This will necessitate a large-scale skin graft over practically all of her left arm - a tedious and painful process. Obviously, she is sorry now for the things she did as a child.

The obvious conclusion is that, in many cases, young Papago boys and girls in the process of tattooing themselves, do not realize the many future implications which will result from their actions. Conceivably they are not fully aware of the attitudes they will encounter in police officers and potential employers. Indian health is still not at a point where the dangers of infection are universally recognized. Neither does the strong sanction of peer disapproval exist in this field, where only 16% of a population is not tattooed. The pressures of social conformity alone would practically guarantee an untattooed Papago bowing to the will of the majority of his contemporaries.

Even as the results of this type of behavior are unclear to the students, so also are the reasons for it. Direct examination on the subject usually elicits the response - "I don't know why I did it." - and I think this sentiment is fairly true. Rebellion - Conformity - these undoubtedly play a part, even if they cannot be verbalized. Too, there is a definite feeling that this is a "custom" of Indians. Many tribes, including the Papago, have a cultural background which includes ceremonial marking and tattooing. The difficulty in trying to trace these roots is exemplified in the quotation from a recent anthropological treatise on the Pima, under the general heading of "Personal Adornment."

> "Tattooing was done by pricking the skin with thorns or cactus needles and rubbing charcoal into the wounds ... Pfefferkorn (Truetlein 1949:188) stated it was done mostly for girls in babyhood; Bartlett

> (1854:II:288) that it was done for women in maturity; Couts (1848 Ms) restricted it to married women; Russell (1908: 161-62) wrote that it was not done at any particular age. Other than embellishment, the only purpose assigned to it was indicated in the statement given by Russell that it prevented wrinkles." (The Hispanic Acculturation of the Gila River Pimas, Paul H. Ezell, Memoir 90, American Anthropological Assoc.)

So four investigators came up with four different conclusions in the course of their investigations!

Anthropologists say nothing about the removal of tattoos. However, a Tucson dermatologist with whom I have talked, had this to say:

> "Removal of tattoos is difficult in dark-skinned people. If you go deep enough to get rid of the ink ...for obvious reasons you will come up with depigmented areas, which are as bad as what you have...I tried Tri-Chloracetic Acid on one tattoo mark...If this is satisfactorily tested in removing the tattoos...then the Herculean task confronts us as to treating the rest. This procedure is very tedious, but oddly enough, not too painful." (Dr. Kenneth Baker, M.D.)

This doctor went on to say that he favored, if at all possible, the surgical excision of tattoo marks over a chemical treatment. At the present time, two teen-age boys from a Reservation school are scheduled to come into the Sells Indian Hospital at weekly intervals for the gradual surgical removal of some markings put on a month ago. In talking with the boys, and their parents, it appeared that parental pressure was the main cause for this desire for the removal of the markings. Aside from the physical effects on the boys of this process, it will be interesting to see if the desire for the removal of the marks persists. In the same school are several older tattooed boys (who introduced these two to the practice) - boys who sneer at the very suggestion of their wanting their marks taken off. I wonder if the desires of the parents will outweigh the inevitable cries of "sissy" (or the Papago equivalent) that will arise from these two boys' classmates!

In concluding my oral presentation, I would like to introduce the first attempts of the Child Guidance Committee at creating educational devices and an educational program aimed at counteracting the practice of tattooing. Obviously, such an educational program, in its totality, should include approaches on all levels and concerning all aspects of the problem. Just as obviously, we have only begun the research necessary to create such an educational program. In the series of slides I am going to show, the main approach used was that of the probable non-acceptance of tattoos on the part of a potential employer.

A series of 35mm color slides was constructed for use in the same manner that filmstrips are used in the classroom, with an accompanying script either read aloud by the teacher, or pre-recorded on tape and played in conjunction with the slides. It is tentatively aimed at a junior high school age audience. It is by no means a finished piece of work, but it did possess the advantage of being something which could be constructed locally at minimum expense. If it seems useful, it can be reproduced fairly inexpensively for use in a variety of situations. For adult Papago audiences, a Papago-language script could be pre-recorded for use with it. In any case, it is the beginning of an educational program which we hope will increase in size, scope and effectiveness during the coming year.

SOCIAL FACTORS IN THE EDUCATION OF INDIAN CHILDREN

Robert Gwilliam

I. Implications of a theory of self-actualization

Kurt Goldstein (1) builds a convincing case for one single drive, that of the actualization of the capabilities, or potentialities, of the self, rather than the cluster of competing drives that makes up the personality construct of some motivational theorists. Within this framework, the release of specific tensions is not the prime motive power in behavior, but rather, the organism tends to react as an integral unit to its environment as it is at the moment perceived and in terms of this primary drive of the organism toward self-fulfillment, -realization, or -actualization. The heirarchy of specific drives more usually postulated now becomes defined as needs, upon the fulfillment of which the energies of the organism are focused in turn and with degrees of intensity as determined by the over-riding press of the one central tendency.'

This suggestion that expansion, rather than mere preservation of the self is the underlying motive power of human behavior has some important implications for the complex relationships that exist between learning and the social environment. When needs requisite to self-actualization are left persistently unmet then behavior occurs that is apparently tension-releasing in its nature. The inevitable building up again of the tension indicates, however, that no basic drive has been fulfilled but only that some unmet need or needs exist. As an example, let me describe the case of a boy from one of our foster-homes in Utah who was brought in recently for psychological evaluation:

Roger is in his early adolescence and has been in the Program six years, the last three of which have been in the same home in an urban area in the northern part of the state. The case worker reports an exceptionally close and affectionate relationship between the boy and the foster parents but it has now been indicated that they want to have him removed from the home after a history of repeated sexual molestation of a younger girl, a grand-daughter of the foster parents.

Roger's own father is Zuni and his mother is a Navajo. They live about one mile from the village of Zuni where the father participates only intermittently in the pueblo social and ceremonial life. Both parents are converts to the L.D.S. Church of several years standing and all five of their children have been in the Program at one time or another. The family is supported from the proceeds of jewelry production by both mother and father and they have built a home with three or four rooms which is perhaps a little above the average for the area. The boy has demonstrated strong emotional resistance to returning to his own home each summer until the last one and makes no effort to contact any of his own siblings while in Utah although a sister lives less than five miles away from him.

In an extensive interview and projective testing with a clinical psychologist, who had considerable personal experience with both Navajos and Zunis prior to the period of his professional training, Roger revealed two dominate preoccupations: (1) a markedly non-Indian achievement theme, and (2) violent crime followed by inexorable discovery and punishment. Diagnosis indicated that here is a boy who is definitely not pleased with himself as an Indian and who is making a gigantic effort to find acceptance in white society which he perceives at the same time as being primarily judgmental and punitive. Overtly, he has effectively rid himself of all Indian speech patterns and has built a much closer relationship between himself and his foster parents than with his own and has sought sexual gratification with a small, non-threatening representative of the white society as a symbol of ultimate acceptance. In fantasy and to some extent in verbalized goal-selection, he has fixed upon salient non-Indian modes of gaining recognition and acceptance.

But again referring to Goldstein, this boy is neither achievement- nor sex-motivated. These are only means, inappropriate and ineffective though they might be, which he has selected in his efforts to achieve realization and actualization of his self and its potential. The occurrence and relative strength of such means seem to be largely a matter of environmental circumstance. Perhaps we might even hypothesize at this point: To the extent that the environment as perceived by the individual is accepting and approving, the energies of the individual will be utilized effectively in meeting his own needs for maintenance, adjustment, and the fullest possible actualization of his capabilities. Conversely, to the extent that the environment is perceived as hostile and non-accepting, the energies of the individual will be expended more in efforts at defense and counter-attack, which may be effective in meeting needs for maintenance and adjustment but will certainly not satisfy the drive for self-actualization, leaving a personality that is incongruent and unfulfilled.

II. Hostile or inadequate environments and their effects upon children

If what has been postulated is true, then we might expect a child who is exposed to a social environment that is perceived by him as being threatening or non-accepting to react aggressively or defensively in order to preserve himself and his identity. Aggression may be expressed directly in any of several socially acceptable or unacceptable ways or passively through the abdication of responsibility and the transferral of it to authority or power figures. Defensiveness may be expressed through compensation or withdrawal. These are reactions that are commonly observed and about which considerable material has already been written so that they need not be discussed in detail here.

Another important dimension of social environment is its adequacy in providing opportunities for the accomplishment of the developmental tasks of childhood and adolescence without which maturity and the actualization of the self can hardly be expected to be realized. When this concept is applied to typical environments in the education of Indians, it may be helpful to think in terms of manipulated or contrived environments and of those that are more naturally derived.

For the Indian child, hostile or non-accepting social environments probably tend to be experienced most among peers in the public school situation. Here teachers and administrators have usually had little enough to do with Indians that their feelings are not strongly set either for or against them. For peers, however, and particularly those in the secondary schools, the issues of social acceptance and tolerance are very real and the reactions that they might be expected to have toward each other as adults are beginning to manifest themselves.

In the boarding school, where the child's peers are of the same or related ethnic groups, the more intense and meaningful rejection will tend to come from teachers and other authority figures whose professional responsibility and dedication have been historically those of eradicating the Indian-ness of the children in their care and replacing it with norms, modes and values of the dominant white society.

Public school environment would tend to be limited with regard to the opportunities for the accomplishment of the developmental tasks as related particularly to the Indian child's society. Out of this experience he would tend to become competent and skilled in his ability to perform in the non-Indian society, but would be relatively inexperienced and inept in his own. At the boarding school there would seem to be limited opportunities for the accomplishment of the developmental tasks as they relate to either society, particularly those of parenthood or intimate interpersonal response and responsibility. We might expect considerable facility to be gained in peer group relationships but since this represents a highly contrived situation, such facility will tend to have little relationship or transferral to real life situations in the larger society.

III. Two specific determinants of an accepting or non-accepting social environment

The role of the teacher in determining the quality of accepting-ness in a child's social environment, is suggested by research conducted in the Sevier County School in Utah in 1955-56 (2). This found a moderately strong, positive correlation between the scores of teachers on the Minnesota Teacher Attitude Inventory and a desirable climate for social acceptance in classrooms with Navajo minority groups in them. This suggests that teachers who are warm and supportive tend to have classrooms that are more accepting of their Navajo members. It would be interesting to see if further study would reveal whether Navajo students in those classrooms identified as having better climates of social acceptance also realized greater academic achievement.

In another study, (3) James Coleman found that in ten high schools of selected types, suburban schools demonstrated far greater pre-occupation with social than with academic achievement. It might also be postulated that suburban schools would have the poorest climate for social acceptance of an Indian minority and that both achievement and attendance of an Indian minority in such schools would tend to be low. The relationship may be somewhat loosely drawn, but the values which lead to the pre-occupation described by Coleman seem to be those which are mostly obviously in conflict with traditional Indian values and which would therefore result in attitudes which would be perceived by an Indian student as being most directly threatening and hostile to him.

IV. Ameliorating effects of a foster home placement program

While the Indian Student Foster Home Placement Program of the L.D.S. Church Relief Society was instituted originally by individuals not particularly acquainted with all the intricacies of Indian education, nevertheless an assumption important in its organization and one which has gathered some strength as the program has developed was that a richer experience could be provided for Indian children by placing them in non-Indian foster homes while they attended a public school than they might otherwise be able to obtain. And a companion assumption was that this experience could be provided with greater warmth and deeper interpersonal relationships than could be experienced in a boarding school situation, particularly by a people whose religious philosophy holds that there is a close interdependent relationship between the Indian and the non-Indian members of that church.

The degree to which this philosophy is functionally operative in the lives of the individual members of the L.D.S. Church is a matter that is certainly open to question but to the extent that it is, it could reasonably be expected to result in a favorable or more accepting environment for social acceptance than where it is not operating or does not exist or where it is not replaced by something comparable to it.

Perhaps one criterion for judging the degree of acceptance experienced by participants in the Program would be the extent to which participation in it has continued and demand for its services has increased. Voluntary participation by both foster parents, the children, and their own parents has been urged as a policy of the Program and considerable care has been exercised to assure that individual choice and initiative be preserved.

During the three-year period beginning with the school year 1958-59, the total enrollment in the Program increased from about 339 to 418 with approximately half of the applicants accepted each year. A backlog of unaccepted but qualified applicants has led to a proposed increase to over 500 students next year. During this same period, the drop-out rate has fallen from approximately 18 per cent to 12.9 per cent.

Foster parents, on the other hand, seem to experience more difficulty in remaining in the Program, as about one-third of the homes are lost each year. Reasons given by the foster parents for withdrawing indicated that about one-third of these did so for reasons beyond their control, relating usually to the financial burden involved, but about two-thirds tended to withdraw because the experience turned out to be a disturbing or unsatisfactory one.

Another concern of the Program has been with regard to the disturbance of the child's own family associations. For the child who would otherwise have to be in a boarding school, this Program seemed to offer an ideal alternative, but at the same time, the child's eventual needs for getting along in either society, would have to be recognized. In order to help assure this, it has been a requirement that each child return to his own home for the summer months with the exception of those few whose home experiences are considered detrimental to them. In such cases, they might be retained in the foster home for the summer period as they would remain in a boarding school if they were classified as as welfare cases. Typically, younger children or children from unhappy homes can be observed resisting this annual re-orientation to their own society, while older and more secure children seem not only to make the readjustment successfully, but the older child from a less secure own home environment seems to be the first to withdraw from school or the Program and to seek re-establishment in the Indian society to the exclusion of his relationships in the non-Indian society.

The possibility that the social environment into which the child in this Program is introduced may not be ideally warm and accepting has already been recognized and in recognition of the responsibility that the Program has for helping the child deal effectively with the adjustmental problems and the non-acceptance which he may experience, the Program maintains a staff of professionally trained caseworkers who are responsible for maintaining liaison between the natural and foster homes and between the foster homes and the broader community, particularly the churches and schools. In this role they not only provide close personal support to the child and his parents, both at home and in Utah, but also sponsor educational activities designed to develop understanding and acceptance on a community basis. That the worker has a significant role to play in this regard is suggested by the fact that workers who serve more compact areas, who have smaller case loads and who have had more experience in the Program consistently have smaller percentages of drop-outs of both children and foster parents than do others.

It is unfortunate that more information is not available with regard to the academic achievement of the children in the Program. One study has been conducted as a partial requirement for the master's degree of one of the case-workers in the Program (4) but in this he made no attempt to compare academic achievement between students in the Program and those in other program. What he did find was that the students in this Program tend to have difficulty in the same scholastic areas as do those in other programs.

Another problem that seems to be recognized by the Program sponsors and staff is that of providing an experience that is radically unique for too small a number of individuals. Foster home programs as a means for educating Indians have been tried before but their primary effect seemed to be that of merely isolating a few persons from their own society without providing adequate access to the other. What has been contemplated here is a program of sufficient size and flexibility that its graduates can live with a reasonable degree of effectiveness in either society and that mates can be found among those with similar experiences. One of the requisites for achieving this, then, would be the maintenance of a near girl-boy ratio. In spite of the fact that there have always been a large number of applicants to select from, it has proved difficult to find qualified boys interested in participating in the same proportion as qualified girls who are willing to do so. The girl-boy ratio in the Program last year was 1.44 and the same ratio among the students accepted during the three year period, 1958 to 1960 inclusive, was 1.73, 1.34, 1.61. Once in the Program, boys tend to drop out at a slightly lower rate than that for the Program as a whole and girls tend to drop out at a rate slightly higher than that of the Program, but the difference is not sufficiently great to compensate for the much larger numbers of girls recruited than boys.

During this same period, 9, 8, and 16 students graduated from the Program during the successive years. Of the total number of 33 graduates for this three year period, 22 were girls and 11 were boys. Of these students, 3 have married: 1 to another graduate of the Program of previous years, 1 to another Indian from outside the Program, and 1 to a non-Indian in the community in which she was last placed. Other follow-up information available at the present time indicates that 14 of these students are still in training: 6 in training programs for Indians or with the avowed purpose of applying their skills in work with Indian people, 4 are apparently planning for careers off the reservation, and 4 seem as yet to be undecided. Nine are currently employed: 4 in work directly connected with Indians and 5 off the reservation. Another 5 of these graduates are currently serving as missionaries for the L.D.S. Church, all of them in areas where there are Indian populations; while three are living at home and are unemployed and the whereabouts of two are not known.

Drop-out rates in the Program peak during the ages of 13 to 16 inclusive, which tends to support subjective observation that the Indian students in the Program tend to be very well accepted socially in the lower grades with the most difficult problems of social adjustment and acceptance occurring in the junior high school. Students who weather this storm, then, tend to remain in the Program well, the drop-out rate for the high school being only slightly higher than for those in the elementary schools. The students in the Program tend to be just about one school grade behind that normally expected for their age with a barely perceptable and probably insignificant decrease of this differential recorded for the last three years. It has been found that those of better than average ability can benefit from programs of special education such as remedial reading instruction but that the ordinary student in the usual classroom situation has perhaps as difficult a time as Indian students anywhere in keeping up with his fellow students. Whereas the students in the Program have the advantage of far greater exposure to English usage and can be expected to be better motivated to practice it themselves, teachers are generally not aware of their specific problems and are thus often ill-equipped to help them.

It is generally agreed in the Program that one of its most challenging problems has to do with the constant adjustment and readjustment of the children as they move back and forth between the two societies and providing both students and parents with the insights they need to make these adjustments successfully. To assist with this, extensive small group meetings are now being held by some of the workers, with both foster parents and students during the school year and with natural parents during the semi-annual visits in the homes, once in the winter and once in the summer. For those who experience more serious difficulty, however, there is some access to a mental health clinic maintained by the Psychology Department of the Brigham Young University and a part-time psychiatric consultant is retained by the Social Service and Child Welfare Department of the Relief Society. A proposal is now being prepared for the establishment of a Bureau of Guidance Services for Indian Students in the L.D.S. Church centered at the Brigham Young University to provide additional counseling and guidance services to the students themselves and to assist with the training of professional and semi-professional people involved in the various applied programs of the Church. Our basic position is that when any agency or institution presumes to help Indian youngsters, it must be willing to assume a kind of total responsibility, not for the child's choices and decisions, but for providing adequate and appropriate support to assure the child's ultimate development into a reasonably mature, contributing, and responsible member of society.

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SIX FAMILIES VIEW EDUCATION FROM THE HOGAN

Eileen Green

In the press of meeting the urgent educational needs of our growing Indian population, needs which require the planning, financing and building of many new school plants, the development of broad educational programs, such as the teaching of English as a second language, research on scholarships, drop-outs, and other problems related to student performance, the administrator and the educator might well become so inundated with facts, figures and dilemmas as to risk losing some of the prospective necessary to keep clear the image of the individuals for whom these benefits are intended.

It would seem wise, therefore, to re-focus occasionally and with an empathetic approach, attempt to visualize some of the problems which confront the Indian individual in his effort to obtain an education for himself or for his children.

During the past year while engaged in nutritional research for Cornell University Medical College, an unusual opportunity was afforded me to observe first hand and to participate in the daily routine of six Navajo families in the Many Farms - Rough Rock area. Though the primary object of my research was to document the diet pattern of the Navajo families with whom I lived, at the same time, having worked in the field of Education for several years, two of which constituted teaching Navajo children on the Reservation, I was profoundly interested in the activities and the attitudes surrounding the whole process of getting the youngsters to school. I saw many instances of admirable and often heroic effort on the part of parents and children alike in their struggle to take advantage of the education opportunities offered them.

Mr. Bernardoni has asked me to select certain incidences which might be representative of "typical" hogan family life relative to the interest of educators. However, before further comment, I should like to state the obvious -- not all Navajos live in hogans. With the movement of many families toward the centers of population such as Window Rock, Chinle, Tuba City, Crownpoint, Shiprock and others, more and more families are enjoying modern conveniences with their children attending schools which are readily accessible. Additionally, many of the children go to boarding schools, and therefore my remarks will not pertain specifically to them. Rather the focus will be upon the hogan children, who, living close enough to the bus route, are enabled to attend day schools. Also, very importantly, the Navajo Tribe, The Bureau of Indian Affairs, and other agencies have made remarkable progress in recent years in ameliorating certain unfortunate circumstances which formerly affected nearly all of the Reservation population. Far-reaching programs, such as the busing program, water development, road improvements, and the formation of the Navajo Public Utilities Authority have indeed raised the standards of living for thousands of Navajos.

However, though statistics are not available as to the number of school children who do live away from the population centers, and who go to the day schools, it would be safe to say that several thousand are still living in hogans scattered throughout the Reservation, and our concern will be the problems of this particular segment of the population.

The six families, whom I shall later describe, are nuclear families who were randomly selected for our study on the basis of acculturation gradient which took into consideration total culture change, such as language skills, housing, religion, economy, and technology. Due regard was also given geographic location relative to mesa versus valley and proximity to paved roads and trading posts. During this time there was also opportunity to visit many neighboring camps as well as the hogans of relatives and friends.

So now, without excursion into either educational or anthropological theory, I should like to draw upon the purely descriptive material of my field notes, and distill from them whenever it is feasible some broadly general observations. For the most part, I have tried to cull out experiences or descriptions of individuals which might be unique or idiosyncratic.

Most of you are no doubt aware of many of the physical hardships which impose themselves upon hogan families, hardships which make regular school attendance difficult for the children, such as the bad roads, often made impassable by seasonal rains and snow, shortages of water which make it extremely difficult to keep the children's school clothes laundered, and, in some areas where wood is scarce, the paucity of fuel materials which may have a direct bearing upon the health of the school children. Then there are the distances some of the children must walk to get to the school bus, distances sometimes made to seem imcomparably longer by their having to wade through the mud and slush. Then there are the fairly frequent long periods of waiting for the stranded bus in the cold of winter or the dust storms of spring.

Sometimes homework presents a problem. It is not always a simple matter for the children to complete homework assignments, the lack of privacy for studying, the absence of good lighting to study by, and occasionally, though fortunately not in the majority of cases, the lack of understanding on the part of parents or relatives who, having a different value system, do not as yet see the advantages of or the actual need for their children getting an education, and who consequently offer little encouragement.

Then there are families who enjoy a rich ceremonial life. Children are loathe to leave the home when a sing is in progress — partly because they welcome the excitement of having friends and relatives around in numbers, they enjoy the feasting which accompanies the ceremony, and because the parents want them to share in the blessings which they believe will accrue from attendance of these religious functions. And of course there may be times during the school year when the child himself must be sung over, and this may necessitate taking from one or two to several days away from school.

Many Navajo parents are, however, becoming increasingly aware of their obligation to cooperate with the school authorities in matters of attendance and schedule sings for the week-ends or to take place during vacations, unless there is great urgency involved. One morning early last fall while attending a Squaw Dance with one of my families, I noticed two station wagons driven by Navajos slowly circulating through the crowd as it drew near the time for school to begin. "They are making sure the kids get to school.", one parent explained, shoving her two rather sleepy but happy-looking children into the car.

Seasonal activities which are necessary to the basic economy of the family cut into the time and energies of both adults and school children. In the fall of the year the field crops must be harvested. If the year has been a favorable one for the production of pinon nuts, a welcome source of supplementary income, the entire family may migrate to the mountainous areas of the Reservation where they often remain for a period of weeks; and since the pinon harvest season often coincides with the opening of school, some children miss the very important first weeks of classroom instruction.

In the spring there is the lambing season, a time when day and night vigilance is necessary to prevent the loss of the lambs and kids by freezing or from destruction by predatory animals.

Since in most families the preservation and maintenance of the flock is of extreme importance, it followsthat during the lambing season some families at least might well feel justified in giving this activity precedence over the children's school attendance.

In view of the temporary advantages which most families would undoubtedly enjoy by keeping the children home to help with these chores, it is indeed impressive how many Navajo parents have the insight to see the more permanent advantages of an education which will eventually equip their children for taking their place in the economy of the dominant culture and enable them to strengthen their own economy by taking jobs on the Reservation.

At the risk of seeming to spell out unnecessarily some of the details, nevertheless I should like to cite some specific cases, pointing out certain factors which might otherwise be passed over as being relatively unimportant. I, for one, though familiar with the Reservation over a period of twelve years, still had no real conception of the all-encompassing nature of some of these problems until I had actually lived under these conditions.

One might posit that the Navajo is inured to hardship and therefore does not feel the cold, say, or the discomfort as keenly as does the less-hardy non-Indian; but I would argue this point, other than to recognize that the Navajo has developed an attitude of acceptance which enables him to operate more or less successfully within the framework of the limitations imposed upon him by the harshness of his environment.

Let's take a close look at Elsie and her family. Elsie is a seventeen year old Navajo girl, a high school junior, who lives in a mud and log hogan with elderly parents and five younger brothers and sisters. She is superintending the younger children in getting the clothes ready for the following school week and seeing to it that everyone gets a bath and washes their hair because as Elsie puts it, she wants "all the kids to go to school looking nice."

Now if that sounds like a reasonably simple expectation, let me describe just what is entailed in achieving these results. Water is almost always hard to come by, even though in recent years many new windmills have been erected for the people's use. Sometimes the roads to the windmills are impassable, or the water at the windmill may be frozen. This was the case during my last winter's visit on the Reservation, so Elsie, as did the other families, melted snow most of the winter, using the water for all purposes including drinking, cooking, and laundering. Now it is surprising and infinitely disappointing to see how little water results from melting a heaping bucket of snow. Repeated trips must be made out into the cold, often through slush and mud, to find clean snow in order to keep the water supply replenished. This task kept Elsie and the children going in and out of the hogan constantly. When it is extremely cold, this poses a heating problem. When the snows thaw, great quantities of mud is tracked in causing further difficulties in housekeeping. Though Elsie constantly wields a broom, it is a discouraging job at best. At all times Elsie keeps buckets of snow on top of the oil drum stove, which is located in the center of the hogan. She is never able to keep enough water melted and heated at one time to fill a tub, so she and the children use basins and wash the clothes by hand. If weather permits, these are hung out of doors. If it is snowing, or if the clothes are apt to freeze, a few pieces at a time are hung on a short line in the hogan, not an ideal solution, since many hogans are already crowded.

Then there is the ironing. Since there is no electricity, flat irons are used and these must be heated on top of the stove or grate. Elsie and the other children, including the boys, take turns using the irons. They substitute a blanket-covered apple box for an ironing board, and do a remarkably good job of ironing their dresses and shirts.

How about fuel? It takes a great deal of wood, even in the good weather, to keep the fires going; but in the winter time, particularly as was the case in this last severe winter, many families in our area had to buy their wood, which sells at $20.00 a quarter-ton truck load, or take the team and wagon, since none of my families owned cars or pickups, and travel quite long distances to obtain wood from the forests.

It takes Elsie and the children most of the week-end to get their clothes ready for the following school week. I suggest that when Elsie walks into her various high school classrooms, that it is the rare teacher indeed who appreciates and understands what this girl has gone through in order to be the well-groomed and attractive young lady she is. It is no wonder that some mothers become discouraged and are not able to send their youngsters to school as immaculately as might be desired.

Though the mothers I have met are remarkably cheerful, I have heard one or two complain that the job is just too much for them, particularly if the mother is not really "sold" on education and sees no real reason to expend that much effort in getting the children into the classrooms.

Elsie has other problems. She has homework to do, quite a lot of it. She gets home late, around dark in the winter time, and the kerosene lamp is already burning in the hogan. Because the mother is tired from herding the sheep and has the babies to care for, Elsie does the cooking, and cooking the old Navajo way takes time, fried bread, fried potatoes, perhaps mutton stew. Helping with dishes afterwards takes Elsie well into the evening. As is the habit of most Navajos in the winter time, the parents like to go to bed early. Even though the mother believes in education and sees to it that all of her children get to school, she does not always understand, especially since Elsie has been in school all day, why her daughter need sit up at night with her books. The younger children want to go to sleep, and there is the price of kerosene to be considered. So about the time Elsie can settle down to do her homework, everyone else in the hogan wants to blow out the lamp. Elsie, who ordinarily shows real respect for her parents and who enjoys a warmly affectionate relationship with them, said to me, "I feel so bad, because I tried to explain how I have to study, but they understand. So now I just act mean and refuse to blow out the lamp. I don't like to do like that." So Elsie shades the lamp chimney with a paper and gets her school work out of the way as quickly as possible.

The mother, an intelligent woman and a talented weaver is very orthodox in her religious views. She likes things clean, but she does not see why baby bottles must be boiled-washed, yes - but why boiled. Elsie was delighted when open house at the high school afforded an opportunity to show her mother some germs under the microscope. The older woman admitted that she saw some germs moving around, but still could see no connection between that and having to boil bottles to keep the baby from becoming sick; because sickness, as Mother has always believed, comes from some imbalance or disharmony in life, most certainly not from some organisms called germs. "She just won't believe it.", Elsie explains with considerable frustration.

I hardly need mention to a group such as yourselves the difficulties which are posed in matters of communication between the two cultures. However, in my field work, where I do not rely upon an interpreter other than an English-speaking member of the family, I, of course, have occasionally been caught up in a net of circumstances which pointed out to me rather forcefully certain limitations which the lack of understanding completely each other's language can impose upon interpersonal relationships.

I am reminded of an occasion when I myself felt desperately the need to communicate. It was during late autumn, snow had fallen, making the roads slippery. I Rather abruptly I found myself off the side of the road and into a small arroya, the pickup listing precariously to one side. Surveying the situation as best I could in the very dark night, I decided there was no alternative but to get out some blankets, find a dry spot, and spend the rest of the night there, hopefully waiting for someone to come along (no one did, but four jets went by overhead). Since it was an extremely isolated area, I knew it would be useless to set off for help until daylight. After an uncomfortably long night, the sound of a rooster's crow was most welcome, indicating that daylight was approaching, and surely, I reasoned, where there is a rooster, there must be people. As soon as light permitted, I set out to find the hogan, sighting it about two miles off the road. I hiked over, all the while berating myself for not having learned more Navajo, and going over in my mind certain familiar words which might convey my situation. I thought "Shi chidi - my car" and "Oshclesh - mud" accompanied by appropriate gestures of despair would probably indicate to these Navajos that the "Bella gana" had somehow gotten stuck. As I approached the old-type mud hogan, I was greeted by a pack of friendly dogs. I called out "Yah t'hey" and after a minute, went to the door of the hogan. An old woman was sitting on the floor, making fried bread. "Yah t'hey, shi ma yazz," I greeted. She looked up and responded "Yah t'hey". "Shi chidi Oshclesh!", I wailed. Her smile widened into a grin, and with a gracious nod toward a sheep skin, she said, "Well, park yourself down, sister, and have a cup of coffee."

In one of my families, both parents speak English and are acculturated to a degree far beyond most hogan families, the father having been in the Marines and the mother having a fifth-grade education. They spend a good deal of time coaching their children in English, though the rest of the members of this extended family group speak Navajo, allowing the children therefore to get practice in both languages. The youngsters are succeeding very well in school and are encouraged by both parents who show considerable pride in their children's success.

The parents in the second English-speaking family are quite unenthusiastic about their children's getting an education; the mother complains about having to wash clothes for the children and allows the children to miss school frequently. Nevertheless, there is a little eight year old boy who takes it upon himself to never miss school and when I stay with his family, I am kept very busy teaching this bright and inquisitive youngster who seems to have an insatiable desire and need to learn new things!

In the next family which I shall describe, we have a mother who speaks very little English, the father is an alcoholic who speaks no English, and two girls, aged eleven and thirteen, the younger of whom goes to school while the older girl stays at home to herd the sheep.

Another family makes its home at the foot of Black Mountain in a very rugged and inaccessible area. The parents, neither of whom speaks English, have discouraged contact with the whites. Only one child, a seventeen year old boy, who has had two years of school, speaks English. The other ten children, six of whom are school age, have never been to school. Their family life is characterized by co-operation in all activities, economic, religious, and recreational. There seems to be very little familial conflict; in other words, we have here the stereotype of a happy, well-integrated family, secure in their position in the social structure of their own culture. During the course of my week-long stay with this family last summer, Kee, the seventeen year old boy, confided that he wanted to be a medicine man like his father and was indeed in training and had been for several years. He and the father are exceptionally close, always teasing and laughing and working together with great mutual enjoyment. When I returned for my winter's visit, a change had occurred. Kee told me that he was going back to school, to Intermountain he said. I asked about the other school-age children. "Yes", he said. "My father has decided that all the kids should go to school." I did not ask why. I try to avoid personal questions which an unacculturated family such as this would tend to resent. But that this decision was a painful one was not mere conjecture on my part, as one day, quite to my surprise, the father told me with tears in his eyes that though he had tried to be a good father, he knew that he should send his children to school and that is what he had decided to do. It goes without saying that there will be a long period of adjustment for all members of this family who have had so little contact with anyone other than close neighbors and relatives, but who have found most of their emotional support within the family circle itself.

Problems of cross-cultural communication are formidable enough, but how about the position of individuals who live in the confines of a single hogan, persons often ranging from the very young to the very old and who possess varying degrees of acculturation. Some family members, usually the older people, but by all means not always, may be found at one extreme of the acculturation continuum, while others may well be at the other extreme.

I think of one family in particular. This family lives in a very small mud hogan of the old type construction located in an isolated area which makes communication of outsiders comparatively rare. But one member of the family speaks English. They are supported almost entirely by the yield from two not very large fields and a small flock of sheep. Their diet often includes wild plants which most Navajos do not bother with these days. In the winter they live largely on corn foods which are prepared in the various traditional methods and must be ground by hand using two stones. They own but one horse and rely upon an ancient wagon for transportation.

And the one English-speaking member? She is a twenty-five year old woman who has a Bachelor's degree from a California college, is a registered nurse who speaks perfect English, possesses an extensive vocabulary and speaks without a trace of an accent!

I once visited the hospital where this girl works and could not resist asking her just what had happened here. She replied that all her life her mother had urged her to go to school and had in fact seen to it that she did!

I have seen many older people such as grandparents and older relatives who, though not always believing the facts which are taught the children in school these very dark night, I decided there was no alternative but to get out some blankets, find a dry spot, and spend the rest of the night there, hopefully waiting for someone to come along (no one did, but four jets went by overhead). Since it was an extremely isolated area, I knew it would be useless to set off for help until daylight. After an uncomfortably long night, the sound of a rooster's crow was most welcome, indicating that daylight was approaching, and surely, I reasoned, where there is a rooster, there must be people. As soon as light permitted, I set out to find the hogan, sighting it about two miles off the road. I hiked over, all the while berating myself for not having learned more Navajo, and going over in my mind certain familiar words which might convey my situation. I thought "Shi chidi - my car" and "Oshclesh - mud" accompanied by appropriate gestures of despair would probably indicate to these Navajos that the "Bella gana" had somehow gotten stuck. As I approached the old-type mud hogan, I was greeted by a pack of friendly dogs. I called out "Yah t'hey" and after a minute, went to the door of the hogan. An old woman was sitting on the floor, making fried bread. "Yah t'hey, shi ma yazz," I greeted. She looked up and responded "Yah t'hey". "Shi chidi Oshclesh!", I wailed. Her smile widened into a grin, and with a gracious nod toward a sheep skin, she said, "Well, park yourself down, sister, and have a cup of coffee."

In one of my families, both parents speak English and are acculturated to a degree far beyond most hogan families, the father having been in the Marines and the mother having a fifth-grade education. They spend a good deal of time coaching their children in English, though the rest of the members of this extended family group speak Navajo, allowing the children therefore to get practice in both languages. The youngsters are succeeding very well in school and are encouraged by both parents who show considerable pride in their children's success.

The parents in the second English-speaking family are quite unenthusiastic about their children's getting an education; the mother complains about having to wash clothes for the children and allows the children to miss school frequently. Nevertheless, there is a little eight year old boy who takes it upon himself to never miss school and when I stay with his family, I am kept very busy teaching this bright and inquisitive youngster who seems to have an insatiable desire and need to learn new things!

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I have seen many older people such as grandparents and older relatives who, though not always believing the facts which are taught the children in school these days, nevertheless give the children an opportunity to attend by accepting additional work loads, such as herding the sheep or working in the fields in order to free the children from these duties.

Even though these overt manifestations of support and co-operation are noteworthy when you take these same family members and put them into an intimate situation such as the hogan, it is obvious that certain strains must be placed upon interpersonal relationships. Hogan living allows for little privacy, particularly in inclement weather where one cannot retreat to the out-of-doors and where other hogans or houses in the camp are not used because there is not enough fuel to heat more than one hogan, as is often the case in the winter months.

I posit that the Navajo's tolerance and respect, as it were, for individual differences is a great saving grace under these circumstances. The degree of warmth and affection which I almost invariably see demonstrated among family members who may have widely diverging backgrounds,ages and interests always impress me as being most extraordinary. And I might add here that the children in the hogans are usually well-behaved, generous to each other, protective of younger children and loved by parents and relatives. In other words, the quality of the educative process in human relations has been excellent.

It occurs that in families where this is the case, that the advantage of such a favorable emotional climate might well go far in off-setting the disadvantages of the harsh physical environment. No doubt some parents are well aware of this and serious consideration is given by them as thoughtful parents when a decision must be made whether to send the youngsters off to boarding school or whether to try to move to an area where the children may attend a day school and stay home. I have known of families who have moved off the Reservation in order to keep the children at home. However, most hogan families who rely upon their fields and flocks for subsistence, do not have the education necessary to obtain jobs in the cities.

Reviewing the varied familial circumstances evident among my families, and the varied attitudes displayed, what are the factors involved that encourage a favorable attitude toward education? Obviously it will take a good deal of research and comprehensive attitude surveys to answer this question, certainly I would not presume to draw any conclusions from the limited sample which my study has provided. When I recall that the most unacculturated mother sent her daughter through nursing school and one of the most acculturated mothers did not really care enough to get her children up in time to catch the school bus, I would hardly care to hazard any guesses about the relationship between the degree of acculturation and attitudes toward education. I am sure, however, that someone will find a way to examine this problem and will come up with some answers which will be most helpful to everyone interested in this most important subject.

Only one thing stands out very clearly, and independently and it is that regardless of how the individual parent or relative may feel about the importance of education for their children, or feel about the content or quality of that education, statistics show an increase each year in the school population which would indicate that the great majority of Navajo parents are cooperating with their leaders and the school administrators in seeing to it, however difficult it may be to them personally, that the children are being given a chance for an education.

SOME TRENDS IN NAVAJO HEALTH BEHAVIOUR *

Dr. Jerrold E. Levy

As the anthropologist on the field staff of the Navajo Health Education Project it has been my task to study Navajo health culture and to transmit that knowledge to the health education staff in such a way as to aid in developing and evaluating new educational activities and programs. Mr. Mico has already discussed the organization and history of the Project so there is no need to present the material again.

One area of specific concern has been the manner in which the Navajo use the Public Health Service facilities and the various factors at work changing the patterns of Navajo health behaviour. In this paper I would like to deal with data which reflect the effects education is having upon the manner in which the western Navajo are utilizing the USPHS Indian Hospital in Tuba City.

Despite expectations to the contrary, it was found that increased health facilities, improved roads, and better modes of transportation have a more immediate impact upon hospital use patterns than does a rise in the level of education. As is so often the case, the effects of education appear to be diffuse and cumulative, bearing fruit only after a considerable amount of time. Frequently the health behaviour of the educated Navajo was found to be quite different from what was expected; less aimed at the maintenance of health than geared to considerations of status and frequently less successful from the standpoint of the physician than the behaviour of the traditional patient. Such findings, while not characterizing the results of education in general, do call for some interpretive comment upon the qualitative aspects of behaviour as contrasted with those quantitative aspects which can be easily measured and which form the substance of this paper.

Two contrasting population samples were chosen for study starting early in 1960. The first, a rural, pastoral group of about one hundred persons, was chosen as a typical though not representative (as it was not randomly selected) extended kingroup living about halfway between Tuba City and the outer perimeter of the Tuba

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* This paper is a product of the Navajo Health Education Project which is being carried out by the University of California, School of Public Health under a contract with the Health Education Branch, Division of Indian Health, U. S. Public Health Service, Department of Health, Education, and Welfare. The author is a member of the University staff working as the Project's anthropologist in the Tuba City Service Unit, PHS Indian Hospital, Tuba City, Arizona.

City Service Unit. The second sample, also comprising about 100 persons, was selected randomly from the total population living in what is popularly called South Tuba, an area of Navajo settlement just south of the Tuba City trading post. This latter sample represents roughly one-third of a community based almost entirely upon wage work and welfare income. It is also the most "urbanized" and acculturated settlement within the Tuba City Service Unit.

Starting then with two contrasting samples, each representing a different line of adaptation, interviews and participant-observation techniques were utilized to collect data concerning social organization, economic life, levels of education, and demography, as well as health behaviour, attitudes and beliefs. Interviews, hospital and field health records were utilized to study the hospital use of each individual over a period of five years (1956 - 1960). This represents the period of time the Public Health Service programs had been in operation prior to the completion of the study. The year 1955 was excluded as that year saw the transferral of responsibilities from the Bureau of Indian Affairs to the USPHS. Essentially, the goal of this part of the total research has been to correlate hospital use patterns with such factors as level of education, distance from hospital, economic wealth, source of income, available health services, etc. Limitations of time in this presentation make it necessary only to touch upon the most important correlations discovered to date.

Population profiles:

Both samples conform, in the main, to what is known of the entire Navajo population. Over 60% of the population in each sample is under twenty years of age. The sex ratio is also balanced, with the predominance of males in the South Tuba area being accounted for by the absence of females in the age group 15-19. This is most likely due to sample size rather than to any peculiarity in the urban sample.

FIGURE I

POPULATION BY AGE AND SEX

South Tuba

Age	Male	Female	
70-	0	0	
60-69	2	1	
50-59	1	1	
40-49	6	3	
30-39	3	3	
20-29	8	8	
15-19	4	0	
10-14	6	10	
5 - 9	13	10	
1 - 4	10	9	
0 - 1	5	3	
	58	48	TOTAL 106

White Mesa

Age	Male	Female	
70-	3	2	
60-69	1	1	
50-59	2	2	
40-49	5	1	
30-39	3	5	
20-29	4	11	
15-19	3	5	
10-14	9	6	
5 - 9	3	9	
1 - 4	11	11	
0 - 1	6	0	
	50	53	TOTAL 103

South Tuba is distinguished from rural White Mesa by two elements. In South Tuba there is no one 65 years of age or older and males between 20 and 29 years are twice as numerous as in White Mesa. This latter fact represents the wage work base of the South Tuba economy. The former is a result of the late settlement of South Tuba primarily by wage workers. In general, the aged have had no reason to settle in the area.

Births and deaths:

The small size of both samples explains the low death rates in both communities. The tribal figure for 1956 is 6.8/1000, for White Mesa 3.8/1000, and 1.87/1000 for Tuba City. These both fall within a normal range of variation for samples of this size although it is probably that the younger Tuba City sample does have a lower death rate than the rural sample.

Birth rates present an entirely different picture, however, and cannot be explained by the smallness of sample size.

FIGURE II

ACTUAL AND REPORTED BIRTH RATES
(Mean average for five year period)

	Actual rate	Reported rate
South Tuba	56/1000	50/1000
White Mesa	66.8/1000	48/1000

The composite Navajo birth rate based upon reported births for 1959 is 43.6/1000, considerably lower than comparable rates from the two samples. As the percentage of mothers between 15 and 44 years of age is approximately the same in the samples, the total Navajo population, and the population studied by the Cornell-Many Farms project (20 plus %), I am led to conclude that the samples I have studied have a true birth rate considerably higher than that estimated by the Tribe and the USPHS (see Navajo Yearbook 1958, p. 339, and USPHS Proposed Plan of Program Operation 1961, p. 85, 90). The implications that such a birth rate has for future use of both health and educational facilities are clear.

Population Distribution by Sociological Units:

South Tuba shows a definite trend away from the multi-household camp. Almost one half of the camps are comprised of single households or nuclear families. At the time the survey was conducted, South Tuba showed a large proportion (8/19) of single dwelling camps with larger household sizes and more individuals per dwelling unit than was found in the rural sample. Despite a higher income and educational level (see Figure III) South Tuba showed characteristics of shanty town overcrowding and lack of good sanitary facilities. For the present South Tuba population this situation may be temporary as piped water has been brought in and new buildings have been constructed during the past year. New residents in the area will probably follow the pattern of crowding already set.

FIGURE III

POPULATION DISTRIBUTION BY SOCIOLOGICAL UNITS

White Mesa

Total Population	Camps	Households	Dwellings
103	7	19	21

(a) 3 dwellings per camp. Range 5 - 2
(b) 2.7 households per camp. Range 4 - 2
(c) 14.7 individuals per camp. Range 26 - 8
(d) 5.44 individuals per household.
(e) 4.9 individuals per dwelling.

South Tuba

Total Population	Camps	Households	Dwellings
106	13	19	19

(a) 1.45 dwellings per camp. Range 3 - 1
(b) 1.45 households per camp. Range 3 - 1
(c) 8.1 individuals per camp. Range 17 - 1
(d) 5.58 individuals per household.
(e) 5.58 individuals per dwelling.

Despite this trend, however, it would be an error to discount the importance of inter-camp cooperation and the existence of the camp as an important sociological unit. An earlier study of South Tuba social organization shows that the extended family and cooperation between related extended families is still the norm in the wage work community. It will probably take a considerable amount of time before this community approximates the Anglo pattern of semi-isolated nuclear families. Matrilocal residence after marriage is still frequent and independent neolocal families are not frequently formed after marriage as is the case in the typical Anglo community.

Economics and education:

The economic life of the two communities is so radically different that it is not possible to see a gradual increase in income as the educational levels rise. Differences in annual per capita wealth are small in the rural sample but rather large in the urban sample. The White Mesa pastoral economy is such that it is only possible to make an estimate by analogy with more detailed studies from the Shonto area. A mean average annual per capita income of $250 for the White Mesa sample compares unfavorably with the mean average annual per capita income of South Tuba which is $572.50. It must be remembered, however, that the rural sample holds more real property wealth in sheep, jewelry and blankets and that its cultural values regarding consumption are radically different from those of the South Tuba sample. Moreover, the economic base in the rural sample determines the total possible wealth in a manner which cannot be changed by a man of education living within it. The most educated parent couples in the rural sample have limits placed upon accumulation of wealth by available forage, water, and ceilings placed upon their grazing permits. It is true, however, that more parent couples have no education in the rural area than in South Tuba. Eight out of twenty-one parent couples in White Mesa have an educational average of 0 years as compared with 5 out of 18 in Tuba City. The difference is not staggering, however, and the educational gap between the two communities is more clearly represented by the higher number of high school graduates in South Tuba (5) when compared with White Mesa (1).

Due to the fact that 7 of the 17 households in South Tuba derive their income from Welfare, this sample must be categorized almost as two distinct groups. The range of education is approximately the same in the two groups and the totally uneducated are not concentrated in the welfare group. Moreover, as Figure IV shows, average annual per capita incomes overlap considerably between the two groups.

FIGURE IV

AVERAGE ANNUAL PER CAPITA INCOME
OF SOUTH TUBA SAMPLE

	Average per Capita Income	High	Low
Wage Earners	$905	$2,038	$270
Welfare, etc.	$457	$ 924	$240

Scatter diagrams reveal that there is no consistant correlation between education and level of income with the important exception of the wage earner group (Figure V.) It is clear that the more highly educated couples are more frequently at the highest income range. It is, then, this group which will be of some interest when analyzing hospital use patterns.

FIGURE V

ANNUAL PER CAPITA INCOME OF WAGE EARNING HOUSEHOLDS
AND AVERAGE LEVEL OF EDUCATION OF THE PARENT COUPLES

Average Years of Education	Household Per Capita Income
13	$2,038
12	1,258
11	1,200
10	802
10	280
9	1,166
9	1,166
4	428
0	441
0	270

Health Behaviour:

Unsurprisingly, South Tuba shows a consistently higher rate of hospital use than does the rural sample. What appears to be a gradual increase of use in Figure VI is shown to be a sudden jump in 1958. That this sudden increase occurs in both samples during the same year is shown in Figure VII where all individuals born during the study period have been excluded. It was during 1957 and 1958 that the number of doctors increased from two to seven, a pharmacy was established and surgical services were offered (end of 1957). I have been led to the conclusion that whenever more staffing and services are available, the hospital use will increase regardless of the population under consideration.

FIGURE VI

TOTAL HOSPITAL VISITS PER YEAR

	1956	1957	1958	1959	1960	TOTAL
White Mesa	61	63	136	143	196	599
South Tuba	215	244	311	347	392	1509

FIGURE VII

PATIENT VISITS PER YEAR EXCLUDING
THOSE BORN DURING THE STUDY PERIOD

	1956	1957	1958	1959	1960	TOTAL
White Mesa	57	55	102	101	117	432
South Tuba	183	182	234	284	275	1158

FIGURE VIII A

AVERAGE NUMBER OF HOSPITAL VISITS PER YEAR BY HOUSEHOLD FOR PATIENTS OVER FOUR YEARS AND CHILDREN 0 - 4 YEARS AND AVERAGE YEARS OF EDUCATION BY PARENT COUPLE.

White Mesa

Household	Average No. of Visits per Individual Over 4 Years	Average No. of Visits per Individual 0 - 4 Years	Average Years of Education per Married Couple
A1a	.9	*	0.0
b	2.9	3.16	1.5
c	.95	3.9	7.0
A2a	2.8	*	2.5
b	1.25	2.5	1.5
A3a	.66	*	0.0
b	.8	.77	0.0
c	.66	.25	7.5
A4a	.4	.55	0.0
b	.5	1.53	2.5
c	.9	2.02	7.0
A5a^{1}	1.1	*	4.5
a^{2}	2.8	1.7	7.0
b	1.3	1.33	0.0
c	2.8	*	0.0
d	.47	.53	0.0
e	.95	8.31	2.0
A6a	.4	*	4.0
b	.9	0.00	0.00
A7a	2.76	*	2.0
b	1.75	2.12	2.5

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* Couple has no children 0 - 4 years.

FIGURE VIII B

AVERAGE NUMBER OF HOSPITAL VISITS PER YEAR BY HOUSEHOLD FOR PATIENTS OVER FOUR YEARS AND CHILDREN 0 - 4 YEARS AND AVERAGE YEARS OF EDUCATION BY PARENT COUPLE.

South Tuba

Household	Average No. of Visits per Individual Over 4 years.	Average No. of Visits per Individual 0 - 4 Years	Average Years of Education per married Couple
ST 2	3.8	2.08	4
ST 8a	4.88	9.0	12
b	6.91	9.75	9
c	1.5	4.0	13
ST 9a	2.11	*	10
b	4.2	5.25	9
c	1.9	3.0	9
ST 11	3.2	5.35	0
ST 13	3.9	4.0	11
ST 16	6.0	*	12
ST 17	1.0	*	6
ST 22	2.78	3.65	2.5
ST 23a	1.2	*	0.0
b	1.2	*	0.0
ST 29	2.68	2.08	10.
ST 31	2.85	3.49	0.
ST 38a	1.82	7.5	0.
ST 39	3.97	5.07	3.

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* Couple has no children 0 - 4 years.

Figures VIII A and B show that there is generally little correlation between educational level and average number of visits per year. There are two areas where clusters exist and, as in the economic correlations, they occur at the extremes. In the White Mesa sample, households with an average education of 0 also have a low rate of hospital visits in 6 out of 8 households. Conversely, in South Tuba there is a slight tendency for more highly educated couples to bring their children into the hospital frequently. The high number of households supported by welfare which have significant health problems tends to obscure the tendency for the more educated people to visit the hospital more frequently. This leads to the questions: who are the non-users and why do the more educated in South Tuba use the hospital more even though they may have no significant health problems?

Non-Users:

The non-user in both samples is predominantly male and either away in school or taking an active role as the head of a family. The cultural expectation is that he is healthy and consequently will seek care only in extreme cases. In South Tuba there are four non-users, all male. Three receive off-reservation care at school or on relocation and one, a teen-ager, has just never come in during the five year study period.

White Mesa has a total of 14 non-users. Seven of these, including three females, are school children receiving school medical care. The remaining seven are active male heads of households and almost half of them report some off-reservation care while away on seasonal wage work. Two of the older men (70-) have some cultural barriers to use of Anglo medicine. Again, the cultural ideal of the healthy active male is probably the factor which keeps the healthy men from traveling great distances to receive care for minor troubles.

High-Users:

In general, high use is correlated with a definite health problem such as tuberculosis, accidents, gall bladder trouble, etc. There are, however, two South Tuba households which have a high use rate in general, and the highest use rate for children 0-4 in the sample. They also have a high level of education and are among the highest per capita income households. There is no health problem in these households to warrant the high rate of use over the total five year period. Children are brought to the hospital as frequently as twice in one day and the impression from the medical records is that they are not considered by the physicians to be making the best use of the facilities. By coincidence, both of these households have members employed by the hospital. This led me to investigate some other educated families employed by other agencies in Tuba City. The results have led me to the conclusion that considerations of status as well as an increased dependence upon Anglo medicine lead the educated Navajo to high use patterns. Almost as an aside, one might mention that the educated Navajo relies very little upon traditional Navajo ways, having almost no sings and relying upon herbalists only sporadically. It is logical to expect him to be a fairly high user, other factors being equal. But the educated Navajo who is not employed by the USPHS is often a high user in Flagstaff. He is proud that he can go to a private doctor and goes to some length to explain why government doctors are incompetent. His absentee rate is often high due to the fact that he insists upon going to Flagstaff for treatment when rapid treatment for minor ailments could be obtained in Tuba City without necessitating sick leave. The hospital employee emphasizes his easy access to the government doctors and goes to Flagstaff as well. Yet, following doctor's orders is not necessarily a characteristic of the educated Navajos studied. The frequency of the childhood illnesses found among the general population is no different and the length of illness as well as the frequent recurrence of respiratory ailments and diarrhea among the children is the same as among the population in general.

It is frequently assumed that the practices in child birth directly reflect the degree of acculturation in a population. Yet the data in Figure IV would seem to suggest that wherever a hospital is available, the Navajo tends to give birth in the hospital regardless of his education. Distance, transportation and general inconvenience to family routine tend to keep the rural sample behind Tuba City in this respect. Nevertheless, the changes in the rural pattern are impressive during the past five years of USPHS programs. Prior to 1956, 43.5% of the South Tuba sample had been born in the hospital whereas only 6.75% of the White Mesa sample had been born in the hospital. Since 1956, all South Tuba sample births have been in a hospital.

FIGURE IX

HOSPITAL VS. HOME BIRTHS

(INCLUDING OFF-RESERVATION HOPSITALS)

	1956		1957		1958		1959		1960		5 Yr. Average	Total Births
	%	#	%	#	%	#	%	#	%	#		
White Mesa	67%	4	40%	2	92%	11	100%	4	50%	3	70%	34
South Tuba	100%	5	100%	5	100%	4	100%	6	100%	8	100%	28

Conclusions:

The most impressive short term trend in the Tuba City Service Unit is increasing use of hospital services. This happens to include off-reservation as well as government facilities. The population explosion now being observed upon the reservation indicates that this trend is not likely to be reversed in the near future. The immediate effect that increased health budgets and facilities as well as better roads have upon the hospital use rates indicate that as long as the Public Health Service continues to extend its services, the increased hospital use will continue. There is, at present, no evidence of a tapering off. Such a leveling could be induced, however, by restricted budgets, or unsatisfactory health services. The tendency for educated Navajos who have completed high school to be high users despite the lack of significant health problems would indicate a long range tendency for increased hospital use even after the rural Navajo has been reached by roads and/or better field medical services. It might even be suggested that as the educational levels rise, increased hospital use may continue despite a slowing up of population growth.

Continuing to look at this long term trend toward higher hospital use by more educated Navajo we find some elements of a disturbing nature. Once an underdeveloped population has been given adequate medical care, the very fact that death rates and various contagious diseases have been controlled serves to lower hospital use. Better knowledge of scientific medical practices usually hastens the advance toward a tapering off of the hospital load and reaching the stage known as ongoing maintenance care. This, of course, has been the goal of the USPHS. Yet, the health behaviour of the more educated Navajo in the Tuba City Service Unit does not indicate that this is happening among that small group. That these people use the hospital more means nothing if it is (a) not maintenance care, or (b) not intelligent use of the facilities.

It has been suggested that the frequency and types of diseases are the same for both the educated and non-educated groups. This would indicate that principles of preventive medicine as well as scientific medical care are not a part of the health culture of the western Navajo. This change can only be brought about by education. That the educated Navajo, at present, is motivated highly by status considerations is, of course, a characteristic of changing cultures. This transition is slow, however, if not actively fostered by educational curricula purposely designed to improve the health knowledge of the people. The Public Health Service is working to develop a special branch of health education. In my opinion, health education should also become an integral part of the public school curriculum.

It is unfortunate that the short term successes obtained by increasing direct medical services serve to keep program planners from looking to the future to consolidate their gains with the more permanent contributions of education.

A STUDY OF THE HOPI INDAIN CHILD AS COMPILED FROM A SURVEY OF SELECTED LITERATURE ON HOPI INDIAN CULTURE

S. Gabe Paxton, Jr.

I. THE PROBLEM: To ascertain general applications to the understanding, teaching, and guidance of the Hopi Indian child from a survey of selected literature on Hopi Indian culture.

II. METHODS OF PROCEDURE:

1. To survey the field of recent literature in the field of Hopi Indian culture and child study. Except for Hack (5) all literature selected for this study was written since 1947.
2. To select literature whose authors have professional background and legitimate sponsorship that lends credence to their integrity and whose conclusions tend to verify each other. Except for Williams (12) all literature selected was mentioned in the Psychological Abstract.
3. To ascertain the cultural factors which tend to influence the Hopi Indian behavior.
4. To formulate applications and implications to the understanding, teaching, and guidance of Hopi Indian children.

III. INTRODUCTION:

The individual comes into his racial and ancestral inheritance through the process of maturation. He comes into his social inheritance through the process of acculturation. (4) Both of these interact. The largest social unit acting on an individual is his culture. A culture may be defined as the way of life of a people, including their knowledge, beliefs, art, morals, laws customs, and social organization.

The environment of the contemporary reservation Indian is a twofold one, in that he lives partly within the Indian society, and partly within a distinctly marginal white society, the values and attitudes of these two groups being frequently neither identical nor even readily interchangeable. The American Indian, for the most part, is a "marginal man" straddling two cultures and must necessarily stay in the margin of both.

In studying any Indian tribe or personality, it soon becomes evident that a personality structure which may be grossly abnormal according to western standards, may be within manageable limits within its own culture. Devereux (2) quotes a doctor who referred an Indian patient to him, as follows:

"We have an Indian patient who in terms of our usual criteria, may, conceivably, be psychotic. At the same time, it is possible that we may be misevaluating his psychiatric status, since he may be merely an Indian whose personality makeup and behavior we do not fully understand."

Too often the Indian is thought of as a stereotyped personality, of a world of braves with waving plumes, who mounted on spotted horses, hunted the buffalo, or fought the U. S. Cavalry, or of a world of tepees, cavalcades, and warlike prowesses. These characteristics are, in reality, true only of the Plains Indians, and then only during recent history. Some western whites expect all Indians to conform to a pattern of sullen shiftlessness and moral and intellectual dullness (2) or the Indian is thought of as childlike, stupid and lazy. (11) Actually this is true only to the extent that other races also have some members who have these characteristics.

Many people believe that it is merely a matter of time until the Indians will be assimilated into the melting pot of America. However, this is utterly untrue. It is doubtful that the Indian will lose his identity either in our present generation or in many generations to come.

The new Federal policy attempts to treat the Indian like normal human beings capable of working out for themselves by means of their own natural and human resources a satisfying adjustment to life, maintaining the best of their own grouphood, culture, and individuality. (11)

The process of teaching persons from infancy to act and think in culturally sanctioned ways is socialization. Personality is in some degree predictable from a knowledge of the socialization practices of a culture. However, great ranges of individual differences exist in all cultures. Within any culture there are some personalities which deviate from the usual patterns. There is not enough information to permit the prediction of every feature of a particular individual in all of his complexity.

The world has been spinning a long time. Its daily revolution has partitioned and patterned the activities of all peoples. The behavior of man is consequently summarized by what he typically does in the course of a single day. A typical behavior day accounts for sleep, waking, cleansing, dressing, toileting, playing, eating, and a host of other evidences of the culture. (4)

The purpose of this study is to ascertain the cultural factors which tend to make the Hopi Indian child what he is, and to formulate the applications of such data to the field of Hopi Indian education. While the principle of individual differences is realized, it is hoped that a study of the common denominators of the Hopi cultural background will give some insight into the personality of the individual Hopi child.

IV. GENERAL INDIAN CULTURAL FACTORS:

Culture is at bottom a composite photograph resulting from its image as reflected by an indefinite number of individual bearers. (7) The individual Indian child of today does not represent unadulterated culture but he should be defined accurately as to the extent of caucasian influences that has been placed upon him. (2)

As one studies the Indian and sees his struggle for self-realization, and for a sense of personal autonomy, then one finds that his interest in the cultural "strangeness" of the Indian, the "quaint" personality traits of the Indian, and the "strange" cultural practices of the Indian gradually wanes and is replaced by a compelling awareness of the universally human qualities of this struggle and by the realization that the Indian is very much like everyone else whose most basic personality trait is membership in the human race.

Karl A. Menninger, M. D. (2) says, "The American Indian will remain for centuries one of the festuring sores on the conscience of America. Mistreatment, betrayal, humiliation, and body and soul starvation have been constantly meted out to the Indian. Within the past 20 years, efforts have been made to undo some of our official crimes and to save for ourselves and for posterity the important contributions of a properly organized, properly recognized and properly safeguarded Indian culture. Nonetheless there still prevails an appalling ignorance of the true nature of the American Indian. Some effort is being made to study the secret yearnings and heartbreaks of the various tribes....it has taken us 150 years to realize that the Indians have feelings."

Since a child is an individual product of the culture from which he comes, it should be helpful in understanding, teaching and guiding the Hopi Indian child to study his culture. The cultural background of any child cannot be ignored if one is to understand his personality.

V. HOPI RACIAL FACTORS:

The Hopi is a representative survivor of the pre-Columbian Indian civilization, preserving the most unmixed of the pre-Columbian cultures and life systems. The Hopi is one of more than 250 Indian groups in the U. S. and Alaska. (10) The Hopi Indians belong to the southwestern plateau branch of Monogoloid stock and are the only ones of the southwestern pueblos to speak the Shoshonean dialect. They are related to the Commanche, Ute, Paiute, and remotely to the Aztecs of Mexico. Today the Hopis are an ethnic minority of some 4,000 in a nation of over 140 million individuals. Their population is increasing about 2.1% per year. (9)

VI. HOPI ENVIRONMENTAL FACTORS:

The Hopi is closely dependent upon his environment and is very much affected by changes in his environment. They are village dwellers who are accustomed to change their ways slowly. Their homes are permanent structures, built of sandstone with wood and mud roofs. (5) The Hopi lives on a ragged plateau of sand and rock from which a series of arid mesas, averaging six thousand feet in altitude. Hopi land is a land of violent moods, eternal thirst, sudden devastating rains, seering heat, and slow aching cold. (6) The Hopi economy is primarily agricultural. (5)

Farming is precarious. 120-day crops must be planted, tended, and harvested in 90 days. The Hopi is confined to a small geographical area which encourages village dwellings and the group's adjustment to it. (10)

VII. HOPI SUPERNATURAL FACTORS:

The Hopis are for the most part overwhelmingly followers of their Indian religion. (11) The Hopis believe the ceremonies will produce results. If they hold a ceremony for rain, they believe it will produce rain. The Hopis believe in an after-life. They believe the soul continues to live. The constant terror of witchcraft has a marked effect on the Hopi character. This important factor is too often brushed aside by non-Indian observers. The Hopis regard the Kachinas, supernatural beings, as their friends -- friends whose human frailities are very well known. In their religion, the Hopis believe that nature and God are one, unchangeable, duality, and the presence of spirits in every object (animism). (10) The Kachinas, who by rewarding the children for good behavior, serves as important behavior motivators. (11) One Kachina, Soyoka, is supposed to take away disobedient children and is also an important motivator for good behavior.

The Hopis have seven deities: (12)

(a) Co-tuk-inung-wa: All powerful one who created earth;
(b) Muing-wa; Guardian of life, lives in earth's interior;
(c) Ana-tum-si: Creator of life;
(d) Baho-li-konga: Great serpent, which controls life blood, sap and water;
(e) Masauua: Death, the destroyer;
(f) Omau: God of cloud and rain;
(g) Dewa: The sun, or father.

Some changes in religicus beliefs are occurring, but there is a firm confidence among most older Hopis that the tribal religion will prevail among the majority of Hopis for several generations to come.

VIII. HOPI PHYSICAL CHARACTERISTICS FACTORS:

The Hopi is rather small of stature, but muscular and agile. He has reddish brown skin, high cheek bones, straight broad nose, slanting eyes, and large mouths with gentle expressions. The hair is straight and black. The women tend to corpulency and age rapidly. (9)

IX. HOPI FAMILY AND CLAN FACTORS:

A human personality in process of formation is conceived as the human organism interacting with other organisms and with the natural environment. (11) Personality is lawfully, if complexly, determined by his family, social class and his culture. The structure of the family governs many of the influences brought to bear on the children during his socialization -- the teaching of the personality to act and think in culturally sanctioned ways. Socialization may suggest that harsh and punitive socialization in childhood tends to make an adult who is prone to anxiety and guilt and who regards other people as potentially hostile. However, findings also show that children who manifest early signs of anxiety or other fearful attitudes are less likely to become delinquents.

With the Hopi, every individual in the group, male or female, young or old, has his proper place and role in the organization of the community. The Hopi children are nursed up to four years, given the breast whenever they cry. The child is never allowed to cry or show any sign of discomfort without being picked up and soothed. He is protected from any disturbance which might interfere with his contentment and well-being. This aids the child's feeling of security in precarious surroundings. The Hopi society demands of each individual a high degree of emotional, intellectual, and volitional development of the child in fulfillment of his distinctly human role. (11)

The Hopi child is never allowed to feel isolated or abandoned, for he always has several groups of relatives to whom he may turn to for comfort and reassurance. The tendency to treat children as a group apart from adults, strongly developed in American white culture, does not exist among the Hopis. A child is regarded as an important member of the community. (11)

The balanced character of the Hopi personality (within their own ethnic group) is shown in the Hopi children whose developed patterns of discipline is internalized from babyhood. They control their emotions consciously. (11)

Accounting in part for the peculiarities in Hopi personality are the fears of various kinds which are systematically ground in childish minds. Indulgence of aggression is sharply restricted. Among the Hopi, competition is the worst of bad taste and physical aggression is rigoriously suppressed but another form of aggression is laid open with a tongue as pointed as the poison arrow he carries on a constant guerilla warfare with his fellows. (6)

The children learn a great deal by imitation and experimentation. The Hopi adults never allow the child to feel isolated or abandoned. Membership in the secret societies give the child a well-balanced and well-defined place in the village, and opens up the male world of the kiva. It builds up thier confidence and steers them toward the adult role they will play the rest of their lives. (12)

X. HOPI INTELLECTUAL FACTORS:

The Hopi tends to approach problems as complex, organized wholes with the varied components in relationship. The Hopis are concise, brief, and complete in their presentations. They show a long period of concentration with interest holding up to the end. They appear to be a slow thinker but he takes many factors into consideration (10 and 11)

The Hopis have excellent memories. They observe detail and have quick correlation. Research findings from the Goodenough, the Grade Arthur, and the Rorschach, and the Thematic Apperception tests indicate that the Hopi Indians are on the average very intelligent, highly observant, and capable of complex, abstract thinking. (10) On the Grace Arthur tests the first mesa Hopis have a mean IQ of 110.7 while third mesa had 115. Hopi children tested 117 on the Goodenough test, higher than American norms. This shows a high potential.

XI. HOPI SEX ATTITUDE FACTORS:

The average Hopi views about sex behavior are more permissive than the views of White Americans. The Hopis talk freely about sexual matters in the presence of children. Little attention is paid to experimentation. There is however, a strong disapproval of sexual union between father and daughter, sister's children and between members of the same clan. (8) Most Hopis agree that sexual misconduct has become more frequent since 1900, due to a weakening of parental control, due to Hopi children being away together at coeducational schools, and children being together socially at day schools. However, the evidence that permissive sex attitudes are recent is inconclusive. There is some evidence that Hopis do not experience remorse or shame as deeply as American whites do. (1)

XII. HOPI GOALS, ATTITUDES, TRAITS, AND CONSCIENCE FACTORS:

A goal being a state of affairs which is the object of desire, the Hopi goals are: Good crops, having money, peaceable relations with other people, good reputation, not worrying, family and children's welfare, being good, not lazy, not being a witch, abundance of food, amusements, sexual enjoyments, attractive mate, having skills, having large clan relatives, and taking part in ceremonies.

Negatively their goals are not religious experience and do not want to be leaders or to have influence.

The Hopis have the following experiences and dicriminate the following emotions: Admiration, contempt, disgust, shameful, good or pretty, approving or accepting, revulsion and disgust with close incest but only disapproval of adultery.

Personality traits that Hopis emphasize are: meek, well-behaved, modest, gentle, kind, doesn't complain or grumble, longing for money, brave and manly, not fearful, friendly, knows what he is doing, submissive, always ready to help clan members, sure of his capacity to achieve, far sighted, generous, honest, hospitable, decent, not lazy, close mouthed, watches out for himself, feels pity and sympathy and is thrifty.

Personality traits which are not in the Hopi language: ambitious, dignified, disciplined, inflexible, self-confident, tolerant, tactful, bully, conscientious, contented, devout, dependable, frank, fair minded, orderly, independent, humorous, domineering, and enterprising.

The child learns his attitudes from his parents and from the close relationship with his clan relatives. They develop an intense concern about the public opinion of his group. He believes that misbehaviour causes wind and drought. He believes in the supernatural and supernatural punishment. He receives actual punishment from relatives. However, most Hopi attitudes develop in the absence of corporal punishment with a marked permissive attitude. (1)

XIII. HOPI TRADITION FACTORS:

The Hopi city-state is a theocracy, leadership being in the ceremonial chiefs, except within the last few years governors have been elected in some villages. The main business of the theocracy is to unite the group in creative activities, to build up morale, and to reinforce the ancient traiditions and priestly leadership. (10) There is no equality in the Hopi order of things. The Hopis have a class society of traditional stratification which is political-ceremonial. Certain clans are higher than others. The common people do not even envy the office holder clans. There are no heroes in Hopi tradition. (10)

XIV. HOPI PREPARATORY SET FACTOR:

All of the foregoing factors in the Hopi tribal cultural pattern give a "preparatory set," or predisposition, to the Hopi Indian personality.

XV. HOPI IDEAL PERSONALITY FACTORS:

The culture defines how the different functions, or roles, are to be performed. (6) Cultural expectations vary according to the different ethnic or racial group. The Hopi culture seeks an ideal personality, the expression of which they teach their children as the behavior expected of them.

The Hopi expresses faith in a harmonious universe in which nature, the gods, plants, animals, and men are interdependent and work together systemically and reciprocally for the mutual welfare of all.(10)

The good Hopi is strong, poised, law-abiding, peaceful (non-aggressive), modest, protective, free of [illegible]iness. The Kahopi, or no-good Hopi, is said to be quarrelsome, jealous, envious, boastful, lacking in integrity, self-assertive, irresponsible, non-cooperative, and is two-hearted. (10)

The advice given to all young Hopis is, "No matter what your age may be, no matter how old you are, you will always continue to do whatever you are able to do." (8)

The advice given to a girl is, "Help with the housework, learn to make good cornbread, don't be lazy, and keep the children well fed.". (1)

The advice given to a boy is, "Work hard, look after the horses and sheep, get the wood, don't be stingy, help your wife's father in the field, and if he is disabled, help him." (1)

The Hopi code says, "Cultivate the Hopi way and you and the whole pueblo will have peace, prosperity and happiness." (10)

The Hopi conception of the ideal personality is as follows:

1. Personal factors: He is a good family man, good provider, affectionate, cheerful, manly, brave, and a good worker.
2. Social factors: He is agreeable in social relations, not dangerous, generous, cooperative, honest, modest, and quiet and unobtrusive.

These factors are summarized from the listing given by Brandt (1) in his study of the ideal Hopi personality.

XVI. HOPI ACTUAL PERSONALITY FACTORS:

The Hopis approve traits of personality which tend to produce approved ways of behavior within their culture. The following are some actual personality traits of the Hopi as summarized from studies by Brandt (1) and Thompson. (10, 11)

The actual Hopi personality can be stated as follows;

1. Personal factors; He is affable and courteous, so calm and emotionally controlled as to appear lifeless at times, talks and acts quietly, modest and does not draw attention to self, submissive but sometimes very stubborn, cautious, avoids depression, grief, and worry, has anxieties about illness, the supernatural, the dark, the dead, and snakes, negatively does not seek religious experience, self-critical, evaluates objectively, approaches problems as organized wholes, capable of highly abstract thinking, high intellectual potential, practical, and inventive.

2. Social factors; He cooperates within the clan group, has strong feelings against intoxication, is cruel to animals,although voices disapproval, has permissive attitude toward sex although he will express disapproval for benefit of whites, disapproves wastefulness and gambling as a loss of goods, the younger have hearty appetites while the older Hopis abstain from eating too much, disapproves theft as it ignores property right, have crops, rain, and illness on their minds much more than do American whites, negatively do not seek to be a leader or to have influence, has a lack of boasting of achievements, is not competitive, and does not feel superior to others of his group.

XVII. HOPI OUTLOOKS VERSUS WHITE OUTLOOKS FACTORS; (8)

The mainspring of western civilization is change. The Hopi civilization is completely opposite. Rather they are concerned with living successfully in the world as it is. The white civilization derives much of its impetus and progress from competition. This has little appeal for the Hopi. Typically, the Hopi man are self-employed and do not have anyone working for them. Generally speaking, the Hopi is hesitant to accept the position of foreman over other Hopis.

A Hopi holds on to his convictions with tenacity. For many years, change was slow and relatively minor, so that Hopi customs remain in potent force today. The Hopis as a rule do not intermarry with other races and tribes. Thus the stock is relatively unaltered and remains inclined toward traditional ways. Their geographical isolation has given them a physical barrier. However, in the last few years change has definitely begun and the white man's effect has begun to have more influence.

The Hopi believes that war is fundamentally wrong. Inevitably global conflicts have invaded Hopi life, though their beliefs have not been affected. Hopi young men have fought and died in their country's service.

In the Hopi tradition there are no "heroes" such as the whites have. Thus, the Hopi does not have hero ideals to follow.

In contrast to the Hopi personality, the American white culture gives political aspirations much more importance. The whites believe in not being submissive. They believe in getting angry on occasion. They are less concerned with near relatives. Though they approve community spirit, they do not demonstrate as much of it as do the Hopi. The whites would disapprove the strong sex interest role. The whites would stress more impartiality, more tolerance, discipline of the "lower impulses", would stress self-confidence and independence in thought and action.

XVIII. THE BASIS FOR HOPI FRUSTRATIONS AND CONFLICTS:

With the advent of change that comes inevitably through contact with the dominant culture, the basis is laid for conflict and frustration. Some factors are:

1. Interaction of the American white culture and the Hopi ethnic minority and the lack of adjusting to current trends by the Hopis. During World War II, both sexes learned new vocations, earned high wages, and saw many aspects of the white man's culture and economy which were previously unknown to them. (6)
2. The Indian young people are caught between two worlds. (10) They must necessarily be "marginal" human beings living in the margin of both the white world and the Hopi world. Children who have been off the reservation bring back new ideas, new attitudes, and new needs.
3. Discord in inter-tribal relations and the lack of tribal solidarity is a historical fact of major importance of today.
4. Friction often predominates in tribal and personal relations and in which the worse is anxiously and habitually anticipated. (6)
5. Inflexibility is a basis for conflict and frustration. Most of the hostility on the part of some Hopis grew out of a pattern of resistance to change. Not being able to face present realities, some withdrew, resisting all change, and desiring the good old days. (10)

6. There have been some changes in Hopi standards: (1)
   (a) The dances and ceremonies are not now given in the traditional way. There are changed feelings about the necessity for letter-perfection. The question is raised in the minds of some as to the efficacy of the ceremonies to bring rain, good crops, etc.
   (b) There is no longer disapproval for one to marry into a village off the mesa. Often the traditional wedding procedure is no longer kept.
   (c) Matrilocal residence traditions are not always adherred to. Traditionally the husband has had to leave his own residence and go to that of the wife. In recent years, the time tends to be reduced for the husband to go to the wife's residence.
7. The change of supernatural views is a basis for conflict and frustration. The older balanced social set-up of the Hopi was maintained by keeping up the religious ceremonial cycle. The annual cycle of ceremonies was important in maintaining the delicately-balanced adjustment of the Hopi social system. The loss of some ceremonies has brought about disorganization and imbalance of the whole social system. In some villages the social balance has been thrown out of "kilter" by denominational doctrines of sin and by the raising of women prestige in the church. (10)
8. New moral standards have been brought about by new living conditions, new trends of behavior in the group as a result of contact with the whites, awareness of white standards, laws, and behavior, new beliefs about conduct, and the awareness that he is not accepted by the dominant society as he is. (1)
9. Many Hopis go off the reservation for employment to nearby cities and towns, maintaining a village residence, and leaving their children often with relatives. Often on week-ends they return to village homes. Increased income allows for a change in living standards which also may be a basis for conflict and frustration.
10. Conflict and frustration arises out of inter-personal relations between progressive Hopis and traditional Hopis.

XIX. HOPI PROBLEMS OF ADJUSTMENT:

The Hopi people are a hospitable people who smile easily and give generously. One may be around them without ever becoming aware of their inner turmoil. (6)

When the whites first came in contact with the Hopi, his sensitive mind and dignity was met with arrogance and impatient crudeness. However, this is not the sole cause of confusion and need for adjustment. The Hopi problem of adjustment is not entirely a result of contact with the whites. It is also a characteristic within themselves. Long before the white man came, there was division and redivision of the Hopi villages. (6, 11)

Some of the modern problems of adjustment of the Hopi are as follows:

1. The problem of anxiety: The Hopis worry about worry, worry about sickness, worry about reunion with loved ones, worry about accidents and death, worry about not being a witch or being the object of witchcraft, worry about going out in the dark, worry about contact with the dead, worry about being around snakes, and worry about change from the old to the new. (1)
2. The problem of aggression: The Hopi is swayed by the aggressive tactics of the white society and this is in conflict with his traditional views of non-aggression in action, thought, and in deed.
3. The problem of competition: Competition is brought on and advised by the white culture. Hopi men have begun to build up individualistic and competitive economic pursuits as well as political prusuits. The tribal council and the civil village government offer new channels of expression. It is difficult to develop an unfamiliar type of leadership role. Certain denominational doctrines of non-participation in civil affairs adds to the social confusion.
4. The problem of Christian church affiliation: Most protestants require that in order to accept their teachings, the Hopi must give up completely the traditional Hopi way of life. To do so brings on a greater inner turmoil than most whites understand. Most researchers (1, 10, 11) feel that there is more anxiety in the social atmosphere of those who are members of a church group. The researchers feel that denominational doctrines of sin have a marked effect on those who formerly did not have a deep feeling of remorse or guilt.
5. The problem of reconciliation of the American white's way of behavior and the Hopi cultural ways of behavior: There is mental confusion of deciding whether to isolate or lock themselves up, thus casting the white culture away, or to face present realities by adopting the most useful of the new without repudiating the basic structure and values of the old, to respect Indianhood but retain open minds toward new values.
6. The problem of the educated: The day school child is in the white world part of the day with the values of the educational system laid upon him by the school and by the teacher, and he is in the Hopi world part of the time with its values. The boarding school youngster is completely uprooted from his native culture for a longer length of time and transplanted for awhile into a completely different world.
7. The problem of basic insecurities: The Hopi male has been required to uproot himself from his own family and to move to that of his wife. There is a conflict of deciding to follow Hopi traditions or to do as he pleases according to the white culture. There is the insecurity of the converted Christian who is torn between the desire to accept the "new way" and to be accepted in local ceremonial life of the "old way".

8. The problem of military requirements: The Hopi young males must serve in the Armed Forces according to the laws of the United States, and this conflicts with the Hopi traditional views of non-aggression.
9. The problem of inflexibility: The modern concepts of "change" conflicts with the Hopi traditional view of inflexibility to change.
10. The problem of new needs and new ways of meeting those needs as brought on by contact with the dominant white culture.
11. The problem of needing to adjust to new ways of political thinking, new ways of economy, and the need for cultural and psychological self-protection and development. (11)

Thompson (10) sums up the Hopi problems of adjustment by suggesting that the three disturbances to the Hopi balance are:

1. Imbalance of the social system;
2. Inflexibility;
3. Absence of a tribal unit in which all participate.

XX. CONCLUSIONS AND APPLICATIONS TO THE UNDERSTANDING, TEACHING, AND GUIDANCE OF THE HOPI CHILD:

Within the limits of individual differences it is possible to predict the inclinations of a child through a study of his culture. The Hopi child as a member of his cultural group has the most fundamental behavior characteristics which are common to the cultural group as a whole. There are many variables which make an individual react to a given situation in a particular way.

While there will be specific exceptions, the following statements are true of the Hopi Indian child in general:

1. The Hopi child will appear anxious to avoid giving the impression that he regards himself as superior to others. Instead of boasting, he will react by making disparaging remarks of his own work in order to evoke counter-approval. He will not compete scholastically, and will not seek to show intellectual excellence.
2. The Hopi child will not become involved in physical fighting but will be quite proficient in using verbal aggression toward other children.
3. The Hopi child will approach problems as complex, organized wholes with the varied component parts in relationships. He will be concise, brief, and complete. He will appear to be a slow thinker, but he will be taking many factors into consideration.
4. The Hopi child will have anxieties about illness and death. Almost every Hopi child will have lost a sibling in death. Infants mortality is high. The Hopi accounts for illness and death as either by sorcery or mental disturbance in the individual.

5. The Hopi child's interest level is high, holding up to the end if properly motivated. He will not ask many questions.
6. Research findings have shown that the Hopi child is above average in intelligence, is highly observant and is capable of complex, abstract thinking.
7. The Hopi child will show excellent memory, observation of details, and will show quick correlation.
8. The Hopi child will be submissive and because of his extreme emotional control will sometimes appear lifeless.
9. The Hopi child's personality is characterized by a highly developed pattern of control in the form of individual conscience. He will control emotion consciously. The child whose pattern of behavior is socially acceptable under the Hopi culture will be comparatively balanced, while those children whose more modern family background has caused them to forego certain ceremonial principles and responsibilities will tend toward a personality disturbance.
10. The Hopi child's attitude toward praise will be discomfort. The Hopi culture is opposed to singling out individuals. According to their thinking, all individuals should be treated alike, no one is superior and no one is inferior.
11. The Hopi child's attitude toward the kiva, the secret societies, the initiations, the Kachina, and the ceremonies will be one of respect and will resent any other attitude on the part of the teacher.
12. The Hopi child will have definite socially-learned convictions on witches, witchcraft, and ghosts and will resent any abrupt negative response on the part of the teacher.
13. The school-trained younger generation who has been conditioned to another way of life off the reservation, either in boarding schools or in the military, will face serious problems of social adjustment upon his return to the Hopi culture.
14. The Hopi child will be affable and courteous (according to his way), smiling and polite, seldom disagreeable, except for a slight withdrawal and brusqueness in the adolescent boy. The Hopi will hide inner turmoil very well.
15. The Hopi child will be modest and will not attempt to draw attention to himself and will stop trying if attention is called to his achievements.
16. The Hopi child will be affectionate due to his socially learned behavior to receive and give affection to a large clan group rather than a closely-knit affection to his immediate family.
17. The Hopi child is expected, by other children, to conform to the "group way" without physical coercion. If he does not conform, group pressure, in the form of ridicule, will be directed his way.

18. The Hopi child will have a wide sex knowledge as a result of a more permissive view of sex behavior in his culture.

19. The Hopi child will not want to be a leader and will not want to have influence over others of his own age group.

20. The Hopi child, in placing blame, will not blame where the action is unintentional, or if he acts under uncontrollable conditions. A person is blameworthy only if he injures one who can't defend himself.

21. The Hopi child has never felt isolated or abandoned. He has not been treated as a member apart from the community. He has been regarded as an important part of the community.

22. The Hopi has been disciplined under the permissive system of initiation and experimentation mostly. He has received actual physical punishment from the whipping Kachinas and adults. Most likely, he has received psychological punishment from fear of the Soyoko Kachina.

XXI. SUGGESTIONS FOR THE CONSTRUCTIVE USE OF THE ABOVE DATA:

1. The Hopi child's personality will reflect the basic features of the Hopi culture, goals, and attitudes, and the teacher should not be upset if they are in conflict with the values and concepts of the white culture. Too often when Indian children go to school, they are weighed and found wanting when they do not conform to the same set of expectations that some educators hold for children under a different cultural background. At the same time the teacher should not forget that every teacher is the "agent" of the dominant culture and is supposed to teach the cultural expectations of the white group.

2. The Hopi child, as he becomes aware of what is expected of him in the white world of the classroom, will do and say what the teacher expects him to do and say as long as it does not deeply conflict with the socially-learned values of the Hopi culture.

3. The Hopi child will appreciate private approval of an action or deed even though he will disparage it and minimize it. He will be embarrassed at public approval or attention.

4. Teaching should be keyed to the Hopi mentality, values, and experiences and the subject matter should be built out of Hopi problems and needs whenever possible.

5. The Hopi personality is characterized by a balanced complexity of social maturity, many-sided control system, abstract and practical mental approach, high intelligence, and the learning capacity is high if teaching is adjusted to his language handicap and his slow but sure temper.

6. School should aim primarily to help the child in integrating himself in life, both on and off the reservation. The educator needs to help the young Indian to understand himself and his Indian heritage as well as the white race and its heritage.

7. The whole idea and program of teaching Hopis should be community centered and flexible enough to meet the various situations.

8. The educator should not be surprised if the idea of competitive award of medals, prizes, and names on scrolls is not received enthusiastically by the Hopi. It would be out-of-cultural nature for him.

9. The Hopi can be expected to have a disturbance of personality balance as he becomes increasingly aware of conflicts of the Hopi culture and the white culture. The educator must understand this in order to help the Hopi adjust.

10. The Hopi needs to remain essentially himself and to retain as much of his Indianhood as possible under the modern concept, and at the same time accept the good of the changes that contact with the white culture will inevitably bring.

* * * * *

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CONFERENCE SUMMATION

Dr. Joseph Poncel

I think that most of us are becoming aware, if we already haven't become so, that we have a very complex situation on our hands. We have a complex duty to perform in winning these grand people of the Southwest into the complete picture of the national set-up that we enjoy. I think that most of us are aware of the fact that the Navajo as well as the other Indians are more or less imponderable and unpredictable. Let me explain this statement.

I can't help but feel that all of this research that we have been doing, including that done by the Mission schools, B.I.A. and public schools, has given us a kaleidoscopic picture of the Indian. But we have still not penetrated into the innermost secrets of the working of the Indian. Sometimes I feel that an Indians success has been achieved in spite of our efforts rather than because of our efforts. That does not mean that we should not continue to study the Indian and work with him in the hope of finally learning what makes him tick. I think that all of these studies are making us aware of how complex the situation is. Certainly the Indians of the Southwest deserve our wholehearted sympathy.

If there is anything I can deduce from all of these studies, it is that besides giving us a kaleidoscopic picture of the Navajo and other Indians in general, is this: If we are really going to help the Indians achieve success, it will be on a one to one level. We've got to yoke ourselves as individuals with these Indian people so that we will enable them to achieve the success that they are so desperately reaching out to achieve. They want the same privileges, the same life, the same failures and the same luxuries that you and I enjoy. The only way they can get it is by teaming up with those of us that can lead them on so they actually reach out and achieve those successes.

Thank you.

Minutes of Business Meeting

April 13, 1962

The business meeting of the Co-ordinating Council for Research in Indian Education was called to order at 4:15 P.M. by Mr. Louis Bernardoni, Chairman.

Old Business

1. Mrs. Mamie Sizemore, Secretary, briefly reviewed the minutes of the meeting of the Policy and Executive Board.
2. Mr. Paul Bramlet reported that no response has been received from Washington to date concerning a request for assistance to conduct a survey of high school curriculum in the State.
3. It was decided that the Co-ordinating Council for Research in Indian Education continue with its regular yearly meeting rather than conduct regional meetings during the year.

New Business

1. Mr. Robert Cullum reported that the Branch of Relocation had received additional funds from Congress and could process all eligible candidates for relocation.
2. Mr. Robert Cullum suggested that New Mexico people be invited to next years meeting of the Co-ordinating Council for Research in Indian Education.
3. It was suggested that next years meeting be held at approximately the same time of year.
4. Mr. J. Lewis Monical made the motion that the present officers and committee members be retained for another year. The vote was unanimous.

The meeting adjourned at 4:35 P.M.

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